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Modern bowling techniques

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MODERN BOWLING

Techniques

JUNIE McMAHON

and

MURRAY GOODMAN

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To Helen McMahon, *whose patience, advice, and willingness to become a "bowling widow" are directly responsible for my career in bowling*

To the Goodman family—*Lillian, Bob, Joyce, and Jack—who suffered from writer's "grouch" while this was being written*

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Foreword*

I can think of few people who are as well qualified to write a book on bowling as is Junie McMahon, whom I have played both with and against for over 20 years. He is still a great player, but what's more, he has acquired the know-how to become an even greater teacher.

Junie grew up in bowling the hard way, starting as a pin boy, and he learned faster and practiced more than any man I ever saw. Of course, he had the natural ability with which few are gifted, but direction must be given to any talent. Junie did it all by himself—through hard work and trial and error. In the process of trying everything to improve his game, he gained much of the wisdom he now passes on to other bowlers.

The fact that Junie played with and against the best, past and present, and did his bowling all over the country on a variety of alleys and under different alley conditions, has helped him in his teaching. I've seen him spend hours with novices, correcting faults, giving advice. He does it not for pay but because he lives bowling and loves it.

Junie is the most intense bowler I've ever watched. When he releases the ball, he's the most serious fellow in the game. He looks like he's going to run down the alley himself and kick the pins over. He works harder at being a good bowler than anyone else; as a result, he appreciates the problems of those trying to learn and improve. He never stops studying and he'll never make the same mistake twice. That's why he can write *the* book on how to bowl. He's been gathering material for it every day of his career.

He has what is probably the best hook in bowling, but few realize how many hours and days of disappointments he spent in perfecting it. He also has the greatest assets a bowler can have: determination and heart. Without either, a person cannot be a great bowler nor even a good teacher.

I was tremendously impressed by Junie's display of courage in the face of long odds when I watched him win the singles and the all-events titles of the ABC tournament at Los Angeles in 1947. The scores of the leaders were already posted. He needed at least a 243 to tie Fred Breckle, of Detroit, in the singles, and at least a 225 to defeat Hank Lauman, of St. Louis, in the all-events. After four frames of the third game, he had to make eight straight

*Andy Varipapa is without question the world's greatest trick shot bowler. Among his numerous achievements were winning the individual match game All-Star championships in 1946 and 1947, receiving the honor of "Bowler of the Year" in 1948, and being elected to the Bowling Hall of Fame in 1957. Andy has a better than 200 average in both ABC and All-Star competition and has rolled 76 perfect games.

strikes in order to win. There were more than 1,500 people watching him and contributing to the mounting tension. He rolled off four straight strikes. Then, just as he was ready to release the next ball, a pin boy hammered against a kickback with a pin. Junie was distracted as he let go his ball. It hit the headpin squarely, but the drive of his hook luckily carried all the pins. He never said a word. With quiet determination, Junie proceeded to "strike out," defeating Breckle by two pins and Lauman by 21.

Junie never tries to tell you how you must bowl. With the exception of a few essential do's and don'ts, he merely describes what is fundamentally right and then advises you to do it your own way. But he stresses at all times the importance of concentration, confidence, timing, and easy and relaxed bowling. And he will keep after you to practice, practice, practice. Those are the secrets of Junie McMahon's success. Whatever he says in this book, take his word for it. He knows what he's talking about.

ANDY VARIPAPA

Preface

Bowling has come a long way since its promoters cleaned house and modernized the sport. Today it claims top rank among participant sports in this country largely because of vastly improved facilities and equipment and new techniques of play. Specially designed clothes, balls that can be fitted to the hand, and all sorts of artificial aids are now manufactured in huge quantities. Air-conditioned, streamlined alleys have visual aids for the spot or line bowler and are equipped with electronic devices that do almost everything but roll the ball down the alley. In actual play, new techniques such as finger-tip control are now used by topnotch bowlers. All of these and many other changes and improvements are described in this volume for the reader who would like a close-up look at the current bowling scene.

Most of the book, however, is devoted to the teaching of playing techniques, both fundamental and advanced, as they apply to bowling on modern alleys. In practicing these techniques the reader is advised to develop a natural style that is well suited to his physical capabilities—that is, his own style, not one that is copied from another bowler. When he has learned to deliver a ball in the same smooth way time after time, then he can practice angle-shooting for spares, spot or line bowling, finger-tip control, and perhaps try out any number of artificial aids for the grip, the hand, and the wrist. But regardless of what techniques and devices he uses, there will be times when his game falls off or reaches a "sticking point." Whenever this occurs he should use the check list in Chapter XII to determine possible causes of his trouble.

This book, in brief, attempts to guide and advise the bowler in his efforts to improve his game. If he will learn the fundamentals and put them into practice—frequent practice—then steady progress should be his inevitable and just reward.

The authors wish to express their gratitude to the following: American Bowling Congress, for supplying needed rules and records; Women's International Bowling Congress, for current details concerning the lady bowlers; *Sports Illustrated,* for permission to use some of their excellent pictures; AMF Pinspotters, Inc., and particularly to Jerry Donovan and George Sullivan, for pictures, material, and advice; and Andy Varipappa, for his fine foreword and cooperation.

JUNIE MCMAHON

MURRAY GOODMAN

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Chapter 1

The Old Order Changes

Not too long ago, if a youngster wanted to visit a bowling alley, he would have been faced with two possible obstacles. In the first place, his parents probably wouldn't let him go. The bowling alley, like the legendary pool room, was out-of-bounds for kids—good kids, anyway, because it was the hangout of hoodlums and gamblers, or so the tales tell it. In the second place, in most cities and communities the child was prohibited by law from entering a bowling alley.

Today, the story is quite different. The once-forbidden game has become the family exercise or hobby or competition, whatever the case may be. It is a common sight for the entire family to be seen bowling together on a Saturday or Sunday in any one of the more than 60,000 alleys sanctioned by the American Bowling Congress throughout the country. What was once a small-time operation conducted on a haphazard basis has turned into a multi-million dollar business (some cities have bowling palaces that range in cost from $500,000 to $1,500,000). The supply of bowlers and would-be bowlers is much greater than the number of alleys available, and new bowling castles are springing up overnight to take care of the overflow.

It is difficult to pin-point exactly the one cause for this bowling boom. The persistence and vigilance of the American Bowling Congress, of course, has always been a factor. Television, too, has contributed immensely to the popularity of the sport. But perhaps the real springboard of the boom was the "new look" given to the game through the invention, mass production, and installation of automatic equipment.

One of our leading designers and producers of electronic and mechanical equipment brought automation to bowling in 1946 with the development of the first automatic pinspotter. This development would not have been possible without the pioneer work of Robert E. Kennedy, a man of vision and determination, who saw that bowling was going nowhere but to its own destruction in 1936 and that changes had to be made to keep it alive.

Kennedy's first step was to change the tone and decor of alleys to make them more inviting to the general public. The old bench became a leather-covered seat, drab alleys were dressed up with color and streamlining, and a curtain drop was introduced to hide the nondecorative pinboy. Through Kennedy's efforts, streamlining became the key to the transformation of the

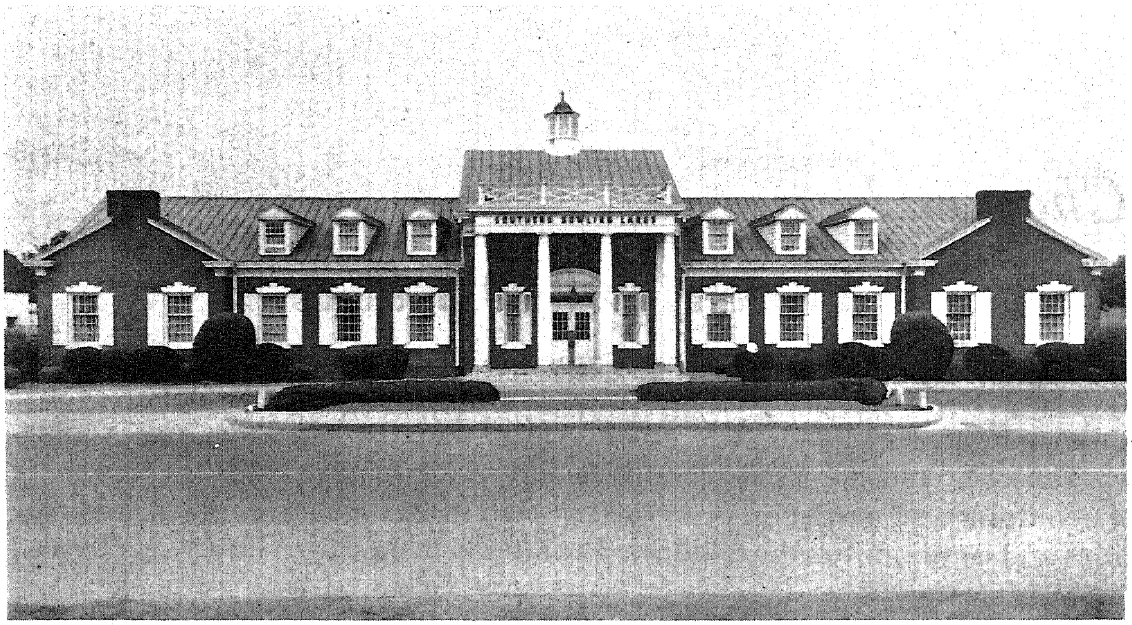


FIGURE 1. *Nobody would think that this is a bowling establishment. The Southern Bowling Lanes, of Memphis, Tennessee, looks more like a Colonial mansion than one of the most successful bowling alleys in the country.*

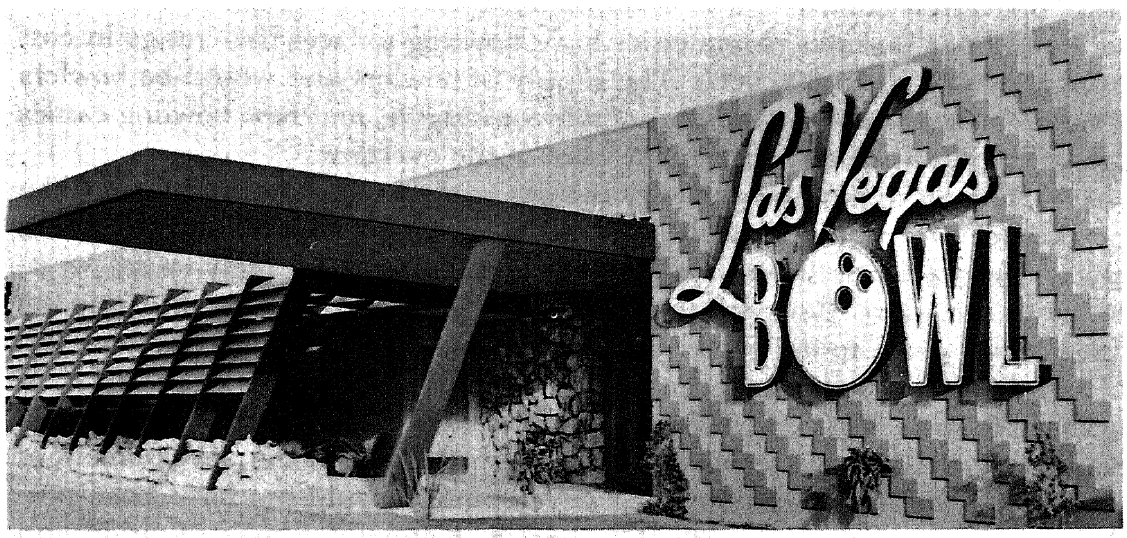
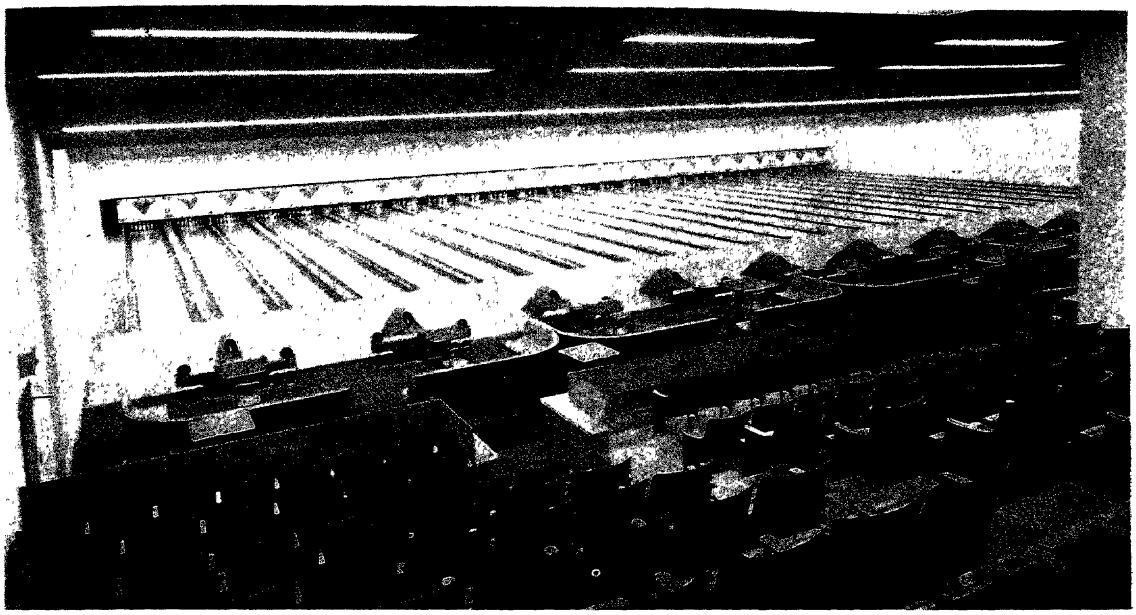


FIGURE 2. *Another departure for bowling alleys is this modern front for Las Vegas "Bowl," Las Vegas, Nevada.*

bowling alley from a saloon "annex" into the ultimate family-circle meeting place.

New buildings were erected and old ones remodeled, with smartly designed exteriors and interiors. However, Kennedy realized that something other than mere streamlining was needed: The game itself was too slow and had to be speeded up.



Courtesy Rosen Studios

FIGURE 3. *The new Paramus Bowling, on Route 17, Paramus, New Jersey, has 42 alleys, complete with pinspotter and underlane "T" return, with a grandstand for 400 spectators.*

In 1935, an inventor, Fred Schmidt, asked Kennedy to look at a machine he had been working on. Kennedy, whose eyes and ears were always open to new ideas, took one long look and decided that such a machine could change the entire future of bowling. When he saw that much work remained to be done in developing this machine, he formed his own company with Schmidt and an attorney named S. F. Hartman. In 1946 he took his idea to the American Machine and Foundry Company—a visit that made bowling history, for in this same year this firm provided its first fully automatic pinspotter. By mid-1957 there were more than 30,000 pinspotters in action throughout the United States and Hawaii. Furthermore, for the first time in the annals of bowling, both the ABC tournament held at Fort Worth in March and April of 1957, and the fortieth renewal of the Women's International Bowling Congress Tournament held at Dayton, Ohio in April, 1957, were fully automatic.

With greater efficiency, the automatic pinspotter sets the pins, returns the ball, and accomplishes all pit services previously done by hand. This mechanical system, which is controlled by electrical circuits, has so speeded up the game that most bowlers can roll from seven and one-half to nine games per hour.

Other innovations followed and are still coming. The underlane "T" ball return was another startling development. After the ball strikes the pins, it is fed onto a track beneath the lane which directs the ball to a T-shaped return rack at the rear of the approach. It eliminates distractions and delays as well

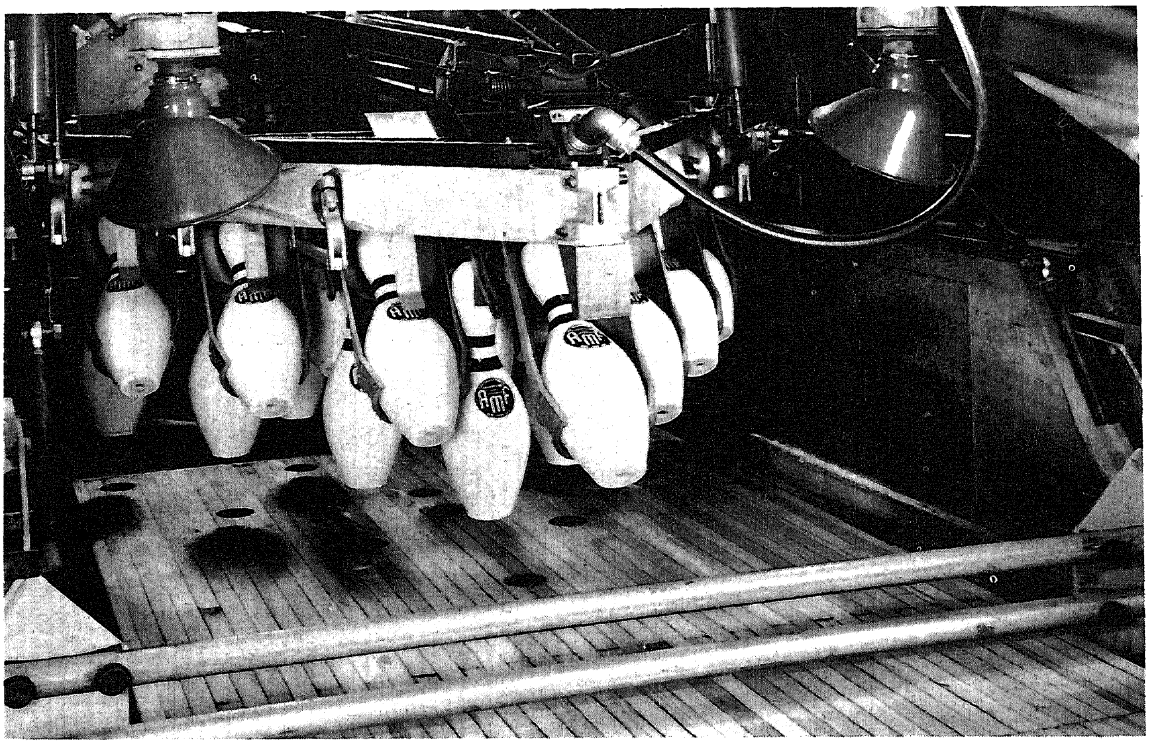


FIGURE 4. *This shows a close-up of an "off-spot" pin being respotted on an alley bed for a second ball. The pinspotter, in conforming to regulations of American Bowling Congress, adheres exactly to one of the ABC's most rigid rules concerning "off-spotted" pins. The rule dictates that the position of an "off-spot" pin cannot be altered in any way.*

as the disconcerting rumble of the ball on its way back, and is both a safety factor and a beautifier.

Several electronic gadgets have been installed for the bowler's convenience. An automatic indicator unit located directly over the pins tells the bowler by illuminated glassed-in panels what he has accomplished on his first ball. It lights up the strike signal on a spare and identifies the remaining pins by their position and number. No longer must the bowler strain his eyes to determine which of the pins are left standing. An electronic eye, designed to work with the pinspotter, notifies the machine when a foul has been committed. In many establishments electric hand dryers have replaced the old towel rack, and even the cones of chalk that used to dirty up hand, ball, alley, and clothing are fast disappearing.

It is small wonder that, with the "jet age" look, the bowling alley has become a civic recreation center. Bowling has not only been accepted by communities as a vital part of their health, exercise, and character-building programs, but it has also been recognized by a growing number of schools and colleges as a "must" in physical education plans. Thousands of industrial concerns sponsor league teams as an aid to personnel relations. There are

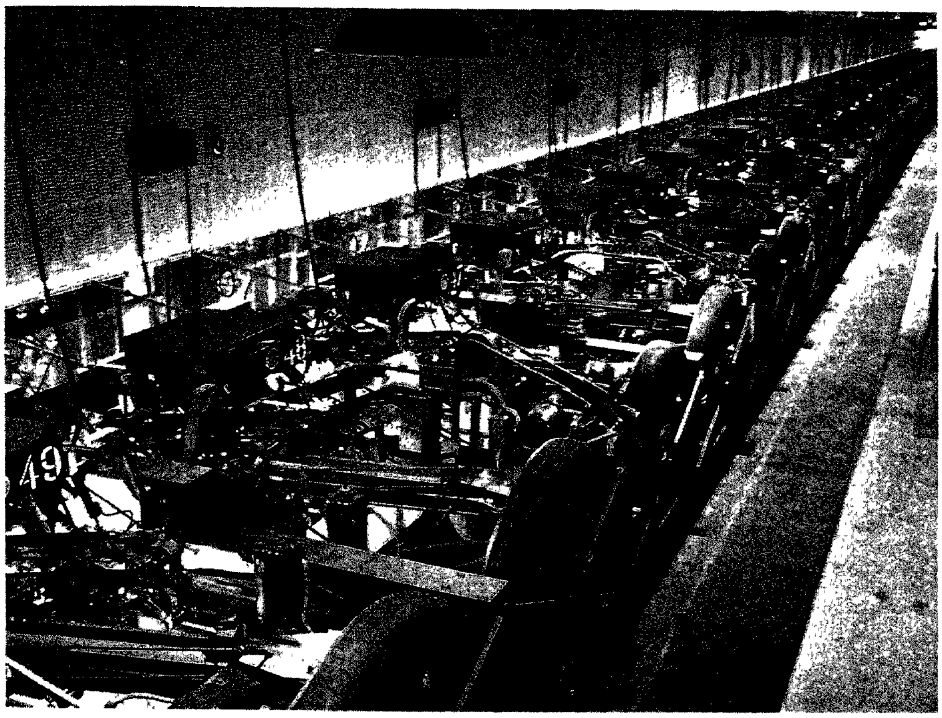


FIGURE 5. *These are the machines that replaced the pinboy and started the boom in bowling. This picture shows the behind-the-scenes view of the 50-alley Bolero of Clifton, New Jersey. The complex machinery of the pinspotter that brought automation to bowling is something the public does not see but should appreciate.*

interscholastic and intercollegiate leagues in competition, and the ABC has added the American Junior Bowling Congress.

Alleys, too, in keeping with the spirit, are better kept and more vigorously guarded, and any damage to equipment is quickly and expertly repaired. Furthermore, the addition of air-conditioning to new as well as older alleys has made bowling a year-round sport.

Undeniably, automation has played the major role in the growth of bowling, but mention must be made of the tremendous boost that television has given to this sport. In the past two years, television publicized bowling to such an extent that even the networks were fighting for top talent. Such top-name bowlers as Bill Lillard, Don Carter, Buzz Fazio, Billy Welu, Tony Lindemann, Steve Nagy, and Lou Campi, who were known only to the followers of bowling, became virtually national heroes. Many local stations produced bowling shows, and three networks had weekly programs, either "live" or filmed. To satisfy the demands of the vast bowling public, the finals of such tournaments as the All-Star in Chicago and the ABC in Fort Worth have been picked up for national display by the networks. Clearly, television is doing its share in popularizing this great sport.

Thus, what was once a saloon "annex" has now become a family place

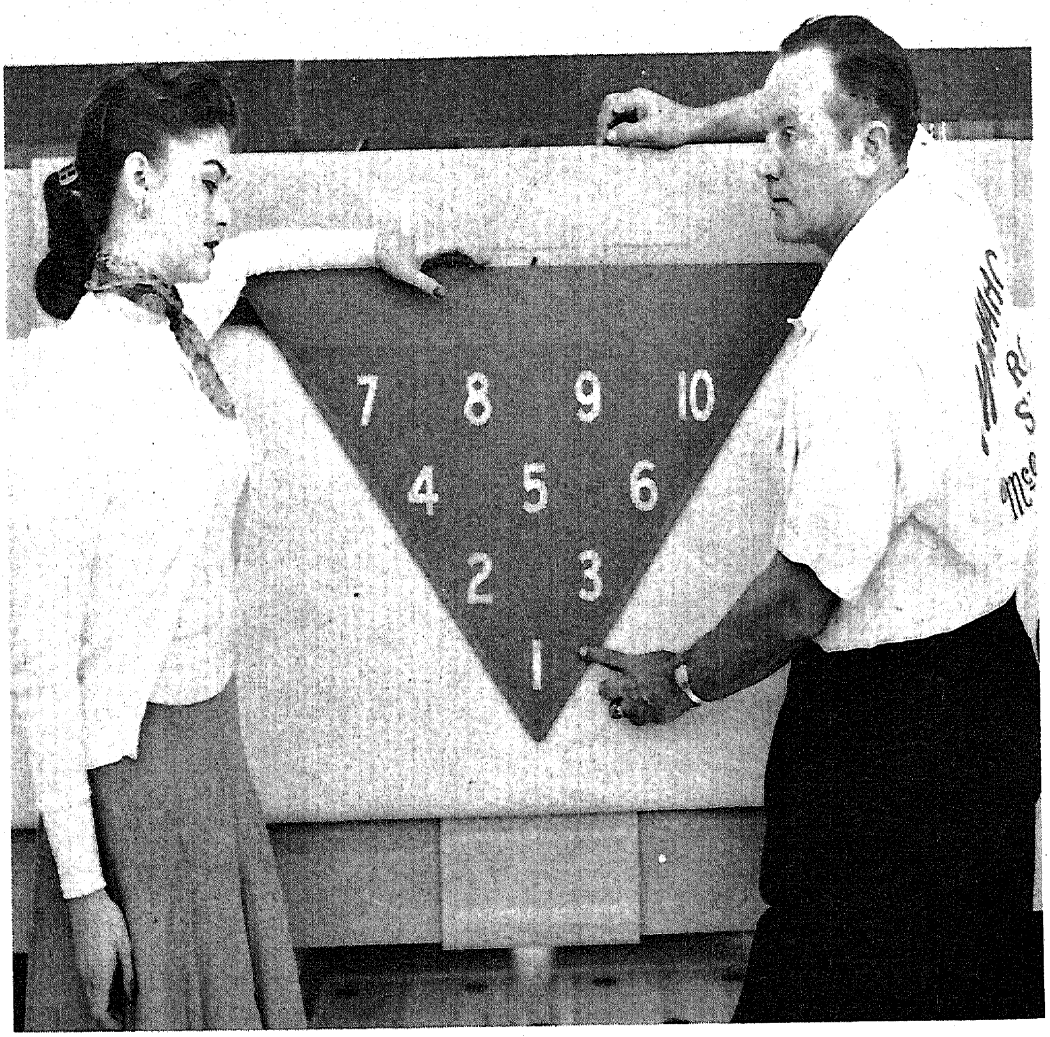


FIGURE 6. *This is the pin set-up as seen on the pindicator. The pindicator, directly above the pins, indicates by lighting the results of a bowler's efforts on his first ball and the number of pins remaining. A strike is indicated by an X. (Illustrated here are Junie McMahon and a bowling enthusiast).*

where the 98-pound wife can match skills with the 200-pound husband while their small children play in nurseries adjoining the alley. It may be difficult to believe, but this sport which attracted only the undesirables at the turn of the century now claims more than 22,000,000 participants in this country alone. Frankly, the change is stupendous.

Chapter 2

The Basic Fundamentals and Rules

Andy Varipapa, one of the greatest bowlers of all during a career covering more than fifty years, describes a bowler as well as anybody ever could.

"A real bowler," he said, "is one who hits where he aims."

That, simply, is the object of the game whether the bowler is rolling only for exercise and health and fun, or is in serious league competition.

Before anybody starts to take aim, however, he or she should at least know the fundamentals and basic rules of the sport. It is not necessary to know everything about the implements of bowling, but it is both interesting and useful to lay a minute foundation which will also be an aid to understanding the language of bowling. For this reason, the following descriptions should prove helpful.

The alley is the playing field of bowling. Since most alley owners seek ABC sanction, they follow the specifications of the governing body. It isn't necessary to go into detailed descriptions of gutters, kickbacks, or pits which surround the alley, or alley bed, or playing surface. The alley bed is the chief concern and the ABC decrees that it must be constructed of wood and be 62 ft., $10\frac{3}{16}$ in. long from foul line to the pit edge and 60 ft. from the foul line to the center of the No. 1 or "head pin" spot, with a tolerance of ½ in. permitted. It must not be less than 41 in. nor more than 42 in. wide.

Most good alleys are made of edge-grained, white-rock maple and Georgia pine aged and treated for two years. The alley surface must be free of all continuous grooves. A maximum tolerance of 40/1,000 in. will be permitted in alley bed levelness and depth depression. Today, lacquer instead of shellac is generally used, because it is cheaper and because it forms a harder surface that doesn't permit the formation of "lanes" or "grooves." The change from shellac to lacquer also forced new techniques to overcome the shift from soft to hard alleys.

The ABC further stipulates that all alleys upon which sanctioned leagues and tournaments are conducted must be resurfaced at least once every 24 months. To the beginner, this may not seem important but as one progresses with bowling, he will discover that newly surfaced alleys require adjustments in shooting.

Resurfacing means the removal of all lacquer (or shellac) and the leveling of the alley bed so that all "grooves, depressions, high boards, or kindred

surface irregularities are eliminated." The entire alley bed surface must then be refinished with lacquer, shellac, or a similar transparent material generally used in resurfacing.

The approach, extending back from and exclusive of the foul line, must be a clear and level runway not less than 15 ft. in length and with a tolerance of only ¼ in. permitted in depth of depressions or grooves. Many modern alleys have approach runways now of 16 ft. or even more in length.

The foul line in bowling can be likened to the pitcher's mound in baseball. It is the point from which the delivery is made and it is a most important one. It shall not be less than ⅜ in. nor more than 1 in. in width and must be clearly and distinctly marked upon or embedded in the alley bed. Although most "week-end" bowlers do not usually observe the foul line, it is a key factor in the ultimate development of a good game of bowling.

The pins are made of new sound hard maple wood. Regularly accepted wood finishes must be used, and the coating has to be transparent or clear. Most pins are now covered with a variety of plastic finishes.

There are specifications on shapes and sizes and weights, but that knowledge is not vital to the beginner. It is interesting, however, to note that the pins must weigh not less than 2 lbs., 14 oz. nor more than 3 lbs., 10 oz., and that the pins shall not vary more than 4 oz. in each set. The height of each pin must be 15 in., with a tolerance of $^{2}/_{64}$ in. either way permitted. Each pin is approximately 5 in. at its widest point. The ten-pin spots are 2¼ in. in diameter and placed 12 in. apart from center to center.

The ball is probably the most important factor to the bowler. The ABC merely specifies that a regulation ball shall be constructed of nonmetallic composition material and cannot have a circumference of more than 27 in. In accepted competition, the ball must weigh not less than 10 lbs. nor more than 16. The ball must be balanced properly and free of depressions or grooves except for the holes used for gripping, identification marks, and a bit of wear and tear. The diameter of the average ball is 9 in.

Most male bowlers use a ball of from 14 to 16 lbs. in weight; the women's choice ranges from 12 to 14 lbs. Since the youngsters have taken up the game so fervently, some alleys now carry balls as low as 9 lbs. in weight.

Range finders, or spots on the alley bed in front of the foul line and at the start of the approach runway, are of recent vintage and permitted by the ABC in accordance with certain regulations. They are not compulsory, but most modern alleys use them as a very definite guide for all bowlers—beginners and advanced.

Thus, a maximum of seven targets may be found at a point 12 to 16 ft. beyond the foul line. They must be embedded in or stamped on the bowling alley surface, and each of the targets must be uniform and may consist "of one or more dowels, darts, diamonds, triangles or rectangular designs." The over-all surface covered by each target shall be no more than 1¼ in. in width or 6 in. in length. Each target must be "equidistant from one another and

Courtesy Rosen Studios

FIGURE 7. *Tony Lindemann points to his range-finder. Beginners should use the second spot from the right gutter.*

set in a uniform pattern." Most alleys use the seven dart-like or long triangle arrowlike designs.

The ABC specifications also permit "at a point 6 feet to 8 feet beyond the foul line and parallel thereto" a maximum of ten guides. Each guide must be uniform, circular in shape, and cannot exceed ¾ in. in diameter.

Similar guides, limited to seven in number, are allowed on the approach runway at points 2 in. to 6 in., 11 ft. to 12 ft., and 14 ft. to 15 ft.—all distances in relation to the foul line. The embedded markings or designs must be parallel to the foul line and level with the surface of the bowling alley beds and approaches.

We mention this information on range finders and targets because many people do not know their purpose. They serve as important guides to footwork, approach, aim, and delivery.

Rules for actual competition are many and technical and most of them, for the beginner, need not be brought up. Included here are the ABC's General Playing Rules and Regulations, which define the game and provide a yardstick for scoring.

Scoring the Game

RULE 1. A game of American Tenpins shall consist of ten frames. Each player shall bowl two balls in each of the first nine frames except when he shall make a strike. A player who scores a strike or spare in the tenth frame shall deliver three balls.

Strike

RULE 2. A strike is recorded when the player completes a legal delivery and bowls down the full setup of ten pins on the first ball. It is designated by an (x) in the small square in the upper right hand corner of the frame in which the complete set of ten pins is bowled down with the first ball. The

count in each frame where a strike is bowled shall be left open until the player has completed two more deliveries. The maximum count on one strike when followed by a spare is 20.

Double

RULE 3. When a player bowls two strikes in succession legally delivered, he shall have scored a double. The count in the frame where the first strike was bowled shall be left open until the player has completed his next delivery. When all pins are downed twice in succession the count for the first strike is 20 plus the number of pins knocked down with the first ball of the third frame following. The maximum count on a double figuring a nine count on the first ball following the second strike is 29.

Triple or Turkey

RULE 4. In scoring three successive strikes, the player shall be credited with 30 pins in the frame in which the first strike was bowled. Thus, in a game of ten full frames, a player must bowl 12 strikes in succession in order to bowl a game of 300.

Spare

RULE 5. Any player who bowls down all ten pins with a legally delivered second ball in any frame has scored a spare. A spare is designated by a (/) in the small square in the upper right hand corner of the frame in which it is made. The number of pins knocked down after the first delivery before the player bowls for the spare should be marked by a small figure in the upper right corner of the frame. The count in such frame proper is left open until the player shall have bowled his first ball in the next frame following, when the number of pins knocked down by the first ball shall be added to the ten pins represented by his spare, and the total shall be credited therein. When a spare is scored in the tenth frame, a third ball shall be bowled in that frame.

Error

RULE 6. A player shall have made an error when he fails to bowl down all ten pins after having completed two deliveries in a given frame provided the pins left standing after the first ball is bowled do not constitute a split. An error is designated by a (—) in the small square in the upper right hand corner of the frame in which the error is made. The number of pins knocked down after the first delivery, before the player bowls at the remaining pins, should be marked in the upper right corner of the frame in which the error is made. The count in every frame where an error is committed shall be recorded immediately following the player's second delivery.

Split

RULE 7. A split shall be a setup of pins remaining standing after the first ball has been legally delivered provided the head-pin is down, and

(1) At least one pin is down between two or more pins which remain standing, as for example: 7-9, or 3-10.

(2) At least one pin is down immediately ahead of two or more pins which remain standing, as for example: 5-6.

A split is designated by a (0) in the small square in the upper right-hand corner of the frame in which the split occurs. The number of pins knocked down on the first delivery should be marked in the upper right-hand corner before the second ball is rolled.

These are the important rules and definitions covering playing and scoring. There are others, some of which we shall state only briefly:

1. Pins knocked down by rebounding pins are counted as pins down.
2. When a ball has left the alley, either in the gutter or in the pit, it is considered a "dead ball," and any pins knocked down by such a rebounding ball cannot be counted.
3. No pins may be conceded. Every shot must be made.
4. If one or more pins are missing from a setup when a first shot is made, the throw shall not count and the pins must be reset properly.
5. The ball a player uses during a game is his ball even if it is an alley ball, and no one else may use it without consent of the owner.
6. A foul counts as a ball rolled, and any pins knocked down when a foul is committed shall not count. There are numerous ways in which fouls can be committed, but the chief one is crossing the foul line with any part of the bowler's person before or after a legal delivery.

In scoring it is simple to remember that a strike counts 10 plus the result of the next two throws, and that a spare is recorded as 10 plus the pins made on the next throw. Two extra throws are allowed on strikes and one extra on spares.

The ABC definition of the "split" has been a controversial item among bowlers, but they maintain that, regardless of the gap between the pins, there is no split as long as the Number 1 or head-pin remains standing.

The following is a typical score sheet at the completion of a game. Although a miss is a miss, whether by error or split, it can still give you an indication of your game's progress. Too many errors, indicated by the (—) on your scoresheet, show that you are not aiming at your spares properly. Too many splits, (0) in the upper right-hand corner, could mean just poor luck or, more often, hits that are too light or too full.

1	2	3	4	5	6	7	8	9	10	TOTAL
X	/	9	8	X	X	9	/	9	X X X	
20	39	48	56	85	104	113	130	137	167	167

The scoring is really simple once you get used to it. There are variations in which the count of strikes and spares are kept to indicate progress of a match, but learning this method is good enough to start. The perfect game —12 straight strikes for a 300 score—is a rare feat. In competition the odds are 294,000 to 1 against it. For the beginner, the odds are 1,000,000,000 to 1.

Chapter 3

Equipment and Preparation

Outfitting a bowler with the proper equipment has become an exacting science. Not too long ago, you could walk into a bowling establishment, rent an alley, pick up a ball, and start rolling. You "bowled natural," as the expression goes, wearing the same shoes and clothes you came in with. Not only did your score show it but so did the approach runway. It was completely streaked with black lines caused by shoes, and every step you took you were in danger of serious physical harm.

Along with the changes in alleys have come distinct changes in dress for bowling, as well as in other necessary equipment. Although there is no general rule on what to wear and how, you no longer feel right walking into the smartly designed modern alleys unless you are dressed to fit into the new scheme of things. Dress and proper equipment are as important to the bowler as the correct bat and glove for a baseball player.

Clothes should be comfortable—not too tight, not too loose. Men wear their regular pants but many women have adopted slacks for bowling, or a blouse and skirt for greater freedom of movement. Because shirts and blouses are on sale at almost every bowling establishment, it is advisable to buy one or two, preferably with short sleeves. There are shops which specialize in shirts in a variety of materials for seasonal wear—from dacron and nylon to ordinary cotton—and ranging in price from $4 to $10.

Socks, of course, should be selected on the basis of fit and comfort. If they are heavy, like gymnasium sweat socks, they may cause blistering of the feet. Too thin a sock is not advisable, either, since it may make your shoe too loose and hamper your footwork.

Shoes are a vital part of every bowler's equipment, and today you will not be permitted to bowl on any sanctioned alley without wearing regulation bowling shoes. You can rent them or buy your own, but you must have them. It may come as a surprise to you to discover that the shoes you must wear for bowling are both different. One shoe is the sliding shoe, the other the braking shoe. Since most bowlers make their slide on the left foot, the right must do the braking. The left shoe, therefore, has a sole either of hard leather or buckskin, to permit sliding; the right has a rubber sole, made of a material that leaves no marks, for braking. If you are a left-handed bowler, or bowl like Lou Campi, the Dumont, N. J., mason who is called "Wrong Foot" because he slides on his right foot although he bowls right-handed, then, of

course, your sliding sole will be on the right foot, and the brake on the left.

You can rent shoes to fit you reasonably at any modern alley. They may be rented for the night at a very moderate cost, but they are available by foot size only and not by width. All good alleys advertise the rental availability of sanitized shoes, which should allay some fears about using shoes others have worn. But you can see the importance of owning your bowling shoes. They are sold at almost every bowling alley in black, white, or smoke oxford or elk oxford for men, and in white, black, red, smoke, and a few other colors of oxford and elk oxford for women. The prices range as low as $3.50 to as high as $15.75.

The ball is the pin-getting implement of bowling, so it is a most important part of your equipment, and its selection requires a great deal of thought. There are no two bowlers alike. Neither are there two people alike in physical make-up. The big, strong fellow likes a heavy ball. The lean one, though not necessarily weak, feels better with a lighter one. There are no two hands alike and fingers are of different shapes and sizes. The long, slim finger needs a different fitting than the short, stubby one. There are hands with long spans or short spans or medium spans.

FIGURE 8. *Ball, bag, and shoes are all the equipment you need to begin a bowling career. The bag, of course, is not compulsory, but it provides both a carrying case and a protection for ball and shoes. Owning his own equipment is vital to the serious bowler.*

Bowling balls are fundamentally the same. They are made of a hard-rubber compound, and are supposed to be almost perfectly spherical and completely balanced. Most bowling balls have a diameter of 9 in. The major difference is in the number of finger holes and the angles at which they are drilled for the individual hand.

Balls are now drilled with from two to five finger holes, depending on the personal need or experience. Of course, you won't find four- or five-finger hole balls on the alley racks for public use. The alley rack balls are usually either two- or three-finger hole balls. (The two-finger used to be popular in the early days, but an especially strong hand was required.) Today, about 500 bowlers to every 1 use a three-finger ball simply because they get better balance, a more comfortable grip, and more efficient and consistent delivery with this ball. The four- and the five-fingered balls are legal but rare, and are recommended only for persons with very small hands or for those who have a tendency to tire rapidly.

Proper fit is naturally the determining factor in selecting a ball. What is a proper fitting ball? How can it be determined?

If you are using the alley rack, where the number of balls available to you is extremely limited, you have to do the best you can. Insert the thumb of your bowling hand almost entirely into the thumb hole and let the rest of your hand virtually wrap across the mounted surface of the ball. If the ball fits, the first joints of the second and third fingers of the bowling hand should extend ~~approximately ¼ in. or thereabouts~~ beyond the outer edge of the other two holes. We are talking, in this instance, of the three-finger ball. The same, of course, is true in measuring for a two-finger ball, if that is your choice. The first joint of the middle finger should be just over the outer edge of the finger hole. Bear in mind that the thumb should not fit the hole too snugly but should be comfortably loose—though not too loose. It would be better all around if the thumb and the second and third fingers were all fairly loose in the ball for your initial session. The supreme test of proper fit is to see if you can insert a pencil under the palm of your hand while gripping the ball. When the span is too narrow, you'll feel a pinching or squeezing. When it is too wide, there'll be a stretching.

Owning your ball, measured by an expert to your particular hand, is the surest way of learning how to bowl without handicaps. Picking a ball off an alley rack is far from the same as owning your ball. Most rack balls are bored at a ⅜ in. angle on all holes, and, while such balls may temporarily satisfy you for a few games, thumbs may soon start aching and scraping and the desire for continued bowling will diminish as the soreness increases.

The bowler who likes the game and wants to play regularly should get a ball of his own, fitted to his liking by an authority, with the holes bored at the correct angle for the particular hand, with the width and depth of the holes accurate for each particular finger, and with the proper span and the correct weight. Using just any ball, you may develop bad habits at the start which become more difficult to correct as time passes.

You can get a regulation bowling ball, drilled free of charge to your liking by an expert, in a price range from $25 to $30. For another $5 to $10, you can add a bag to carry both your ball and shoes. The bag is necessary not only to carry the ball but also to keep it from bouncing and chipping.

Preparation is a word of tremendous importance in bowling, because it means not only possessing the proper equipment but also a fundamental knowledge of how to use it. You have your shoes and your ball; now you are ready to bowl. You have an idea of what you should do. You have watched them do it on television and it's easy. All you have to do is to pick up the ball—which seems awfully light for its weight—take a few steps, and let go. With all that speed stored up for your first game, you may even be worried about breaking the pins, the back of the alley, or both.

If it were that simple, everybody would be bowling 300. True, you may go out there the first time and bowl a terrific game. It's happened before and will happen again. Lou Campi averaged better than 180 the first time he bowled—but how many of you are Campis? Your best approach to bowling is a cautious one, with a willingness to learn and adapt your own particular capabilities to the way it should be done.

FIGURE 9. *Lee Jouglard of Detroit instructs pretty Fran Miller in some of the finer points of bowling.*

Instruction from a qualified bowler is available gratis at most modern alleys. If you have the inclination and the time, ask for advice. You will get it and you will realize that while the instructor cannot teach you to do things that aren't in you to do, you will learn most certainly what not to do. By getting instruction, you will avoid the mistakes that become habits. If you start right, there's a greater chance that you will bowl toward better scores and not get discouraged.

There are many things, essential ones, that you must learn and develop if you are to take the sport seriously. We don't want to complicate your thinking and tell you that it is a tough sport to master, but facts are facts and we might as well face them. Whether you intend to be just a casual bowler or would eventually like to get into league competition and not be low man, you must understand the essentials. You may shoot one or two 200 games but a 200 or better average is a mighty achievement.

Most of the essentials will be subsequently discussed at length but just to give you an idea of what the science of bowling entails, besides using the proper equipment, here is a list of them: grip, stance, approach, footwork, delivery, types of deliveries, release, lift and turn, direction and speed, follow-through, playing alleys, shooting spares, and spot and pin bowling.

Temperament, another word with a very definite meaning, should lead all these categories, for without the proper mental approach and spirit you cannot be a good bowler, nor can you enjoy the game. We all make mistakes and we all miss. And most of us, at one time or another, like to unleash our pent-up emotions with words and deed. On a golf course, people have been known to break clubs. There are displays of ill temper in other sports, but in bowling there is little room for the poor sport.

If you have any desire to be a good bowler, curb your temper at the start. There are occasions when you want to heave the ball through the floor or roof. You can imagine how I felt—with my name already inscribed in the Hall of Fame—when I shot a game of 114 at the All-Star Tournament in Chicago several years ago. What's more, my game went into the records. Your bad ones you can just forget.

Chapter 4

Grip

Grip is a word of many meanings; but in bowling, as in most other sports, it signifies hold. It does not mean seize or clutch, as some enthusiasts are inclined to do.

How do you figure out whether to use a two-finger ball or a three-finger ball? Do you spread the fingers or keep them close together? These are major problems to a bowler.

Pick up a baseball and see what happens. You will find almost automatically that you don't wrap your entire hand around it but grip it with your thumb and the next two fingers. Somehow, that comes naturally.

That's the answer to grip in bowling. Regardless of the number of finger holes your ball has, the grip has to be natural. There should be no pull on either your fingers or your arm muscles. The ball must never feel like a dead weight. There must be a feeling of comfort and relaxation in the grip so that when you hold the ball prepared to go through the smooth and graceful motion that leads to delivery and release, the ball is part of a well-oiled machine. If there is the slightest discomfort in your grip, something is wrong somewhere. Only doing what comes naturally leads to confidence and a relaxed approach.

The type of grip you use or want to use depends entirely on yourself. If you use the alley racks, you haven't much choice, of course. If you buy a ball, you will automatically be fitted for the type of grip suited for your particular hand. You may desire to change later on, as your game progresses, but, fundamentally, the man who sells you your ball is capable of making a correct analysis. And he will invariably suggest a three-finger ball unless you request otherwise.

There has been a great deal of experimenting with bowling grips since the introduction of new professional variations of drilling the finger holes and inserting artificial aids into them. Such variations are perfectly legal, but if you're just beginning you should concern yourself only with one grip—the conventional grip.

1. **The conventional grip** is one in which the thumb hole is drilled on the centerline of the ball. The finger holes are drilled at equal distances to the right and left of the centerline, if it is a three-finger ball. For the conventional two-finger grip, both the thumb and middle-finger holes are on the centerline. The holes are bored at the ⅜-in. angle, as in the alley rack balls.

The thumb is inserted three-quarters of its length and the other finger, or fingers, as the case may be, two-thirds, or up to the second joint. This gives you a natural, balanced grip. It is the introductory grip, and where you go from there is for you alone to determine as you learn the game and practice to improve it.

A similar situation is that of the kid pitcher who starts with a straight ball and experiments as he grows older and bolder with curves and drops and sinkers and sliders. Each delivery requires a different finger grip. Thus it is in bowling. You arrive at your best grip by practice and trial and error. Since you have to start somewhere, the conventional grip has been found to be the best. Don't imitate the great bowlers you've seen on television—you'll regret it!

The two-finger grip, as we've said before, is rapidly passing out of existence. It is the "old school" method, requiring exceptionally strong hands and fingers, and tremendous control. Certainly, for the beginner, a two-finger grip is both unwieldy and impractical.

The three-finger grip has proved to be the most comfortable and most natural of all grips. Just as two heads are supposedly better than one, three working fingers are better than two. The remaining two fingers lend balance that leads to confidence and relaxation. You have the option of keeping them closed or compact, or somewhat spread or open.

The closed-finger grip is the one I use, but that doesn't necessarily mean you have to use it. The majority of good bowlers use a fairly closed grip, although a few roll with an extremely tight grip or with an equally extreme spread of the fingers. For the more popular three-finger ball, the index finger in a good closed grip is moved slightly away from the middle-finger hole, while the little finger, or pinky, is almost snug up against the ring finger.

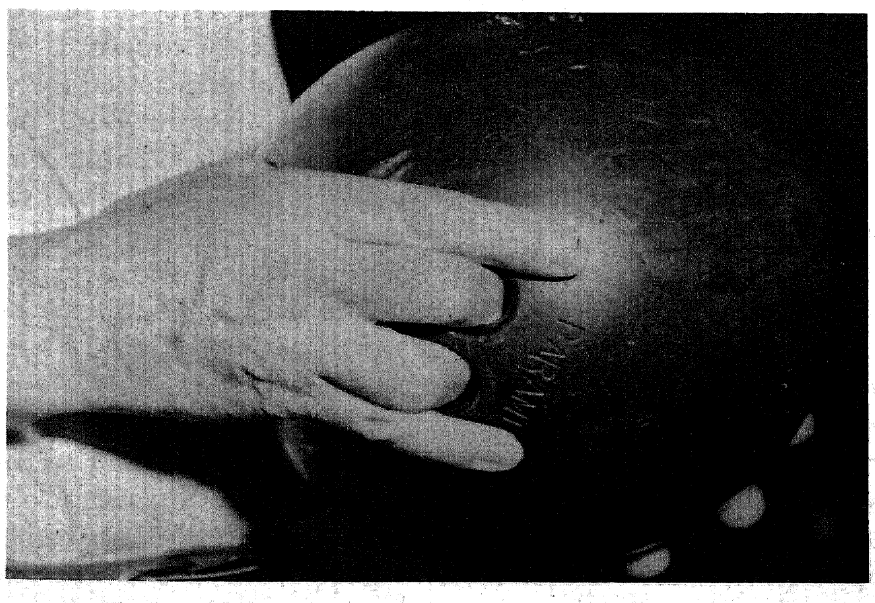


FIGURE 10. *The closed grip, with supporting fingers close to the bowling fingers.*

Such a hold promotes the feeling of having additional gripping power at that particular point of the hand and relaxes one completely, so that there is no tenseness or tightening of the arm muscles.

The open grip, while not as common among better bowlers, is advocated by some. This is the case where the index finger and little finger are spread away from the bowling fingers. Some bowlers, with exceptionally long and strong fingers, find that this grip gives them better balance.

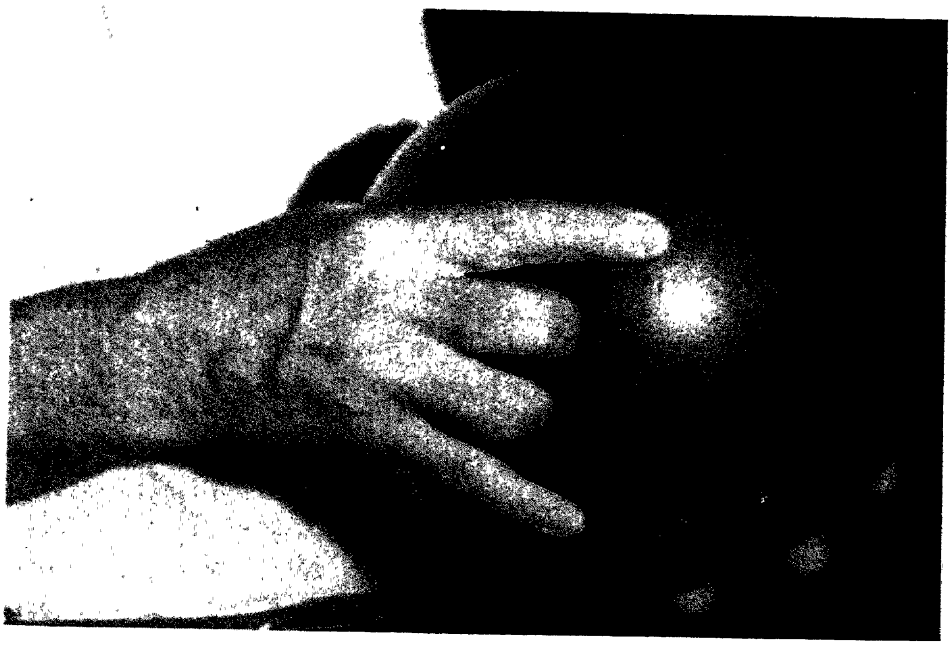


FIGURE 11. *The open grip, with fingers away from the bowling fingers for needed or added support, as the case may be. Fingers should not be too close or too spread apart so that they feel uncomfortable or unnatural.*

This is strictly a discussion on grips and not on the types of deliveries that result from the various ways of holding the ball as well as releasing it. It took me a long time and much experimenting before I discovered that the three-finger grip with the fingers fairly closed was the right grip for me to use. Just knowing the conventional variations and trying them for the best results will help one arrive at his proper grip.

There are many different innovations in the bowling grip, some of which will be described in the chapter, "Advice to the Advanced Bowler." For the present, however, the conventional two- or three-finger grip is enough to get you started on your game.

You've undoubtedly seen cartoons of a bowler rolling down the alley with the ball stuck to his fingers, or vice versa. It's always good for a laugh, and, while it is a bit exaggerated, it should provide the object lesson for this chapter. Obviously, the man in the cartoon was not using a ball that had been properly fitted to his individual grip.

Chapter 5

Stance

Most books on bowling dismiss stance with a handful of paragraphs, make recommendations suited, perhaps, to the particular style of the author, and let it go at that.

Of course, everybody knows how to stand. But few bowlers realize the importance of stance when they take their positions on the approach runway. Actually, it is the key to successful bowling.

Stance is the springboard for your entire bowling effort. How you stand and where you stand on the approach governs your concentration, relaxation, footwork, approach, and delivery. It is the point where you start timing your approach; and timing, along with concentration and relaxation, are the elements that make the difference between a consistently good score or an average or poor one. Without timing, concentration, and relaxation molded into your game until they become habits, you cannot ever hope to be a really good bowler.

Have you ever seen a golfer approach a ball to tee off or to make any other shot on or off the green? You may have snickered at his or her antics. If you're a golfer, you'll know this is no laughing matter even when you're playing for the fun of it and use up more than 100 strokes doing it. Even for the duffer, every move is deliberate. He will wiggle and manipulate. He'll move his feet until they're in exactly the position he wants them. His head is held stiffly, eyes glued to the ball, and his arms grip the club as if life itself depended on the shot.

Concentration is that important. You should enter into the game of bowling with the same spirit as the golfer has toward his game. Concentration begins from the moment you pick up the ball, walk to the approach runway, and take your stance.

Proper stance doesn't mean just taking a position on the approach runway. It involves position of the feet, how to stand, how to hold the ball, the distance to stand away from the foul line, and where to stand in relation to the gutter.

Position of the feet ~~in the stance~~ is up to the individual bowler. Naturally, the feet are kept close together; ~~Most bowlers put the~~ left foot slightly forward but they may be kept even, ~~if one prefers.~~ ~~The main thing is that the~~ feet and shoulders face the pins squarely, and that the person is completely balanced, relaxed, and concentrating, ~~as he prepares to bowl~~.

How to stand is another problem of stance. How do you stand? Do you stand upright? Do you bend slightly? Do you crouch? Here again your physical attributes and your ultimate experience will supply the answers. It figures that, if you are an extremely tall person you may have to bend to be natural and comfortable. But if you are short, you may bend, too, if you so choose. It's all up to the individual. You will learn as you go along that the position you assume may have a great deal to do with your speed and control.

Holding the ball and how to stand are almost inseparable. You can't stand upright and hold the ball below the waist with any degree of comfort, and it is reasonable and logical to assume that you can't crouch and hold the ball above the waist. Obviously one must work with the other, so we will combine the two in the following description of the various stances.

The upright stance is where you stand erect with the ball held fairly high, up around the chest. Some good bowlers even hold the ball higher, parallel to the chin. To hold it higher than the chin would be foolish, since it would obstruct your view of the pins, and it couldn't be a comfortable, relaxed position.

FIGURE 12. *Junie McMahon holds the ball in the chest-high upright stance used by many bowlers. The left hand supports the weight of the ball at the approach line.*

There are many bowlers who use an upright stance and hold the ball about waist level. There is nothing wrong with such a stance if it is the position most natural for the bowler.

The bend, or stooping position, is the one in which the ball is held waist high or slightly lower. The degree of bend varies with different bowlers and some even move their bodies forward 45 degrees. It is not an uncommon position in bowling.

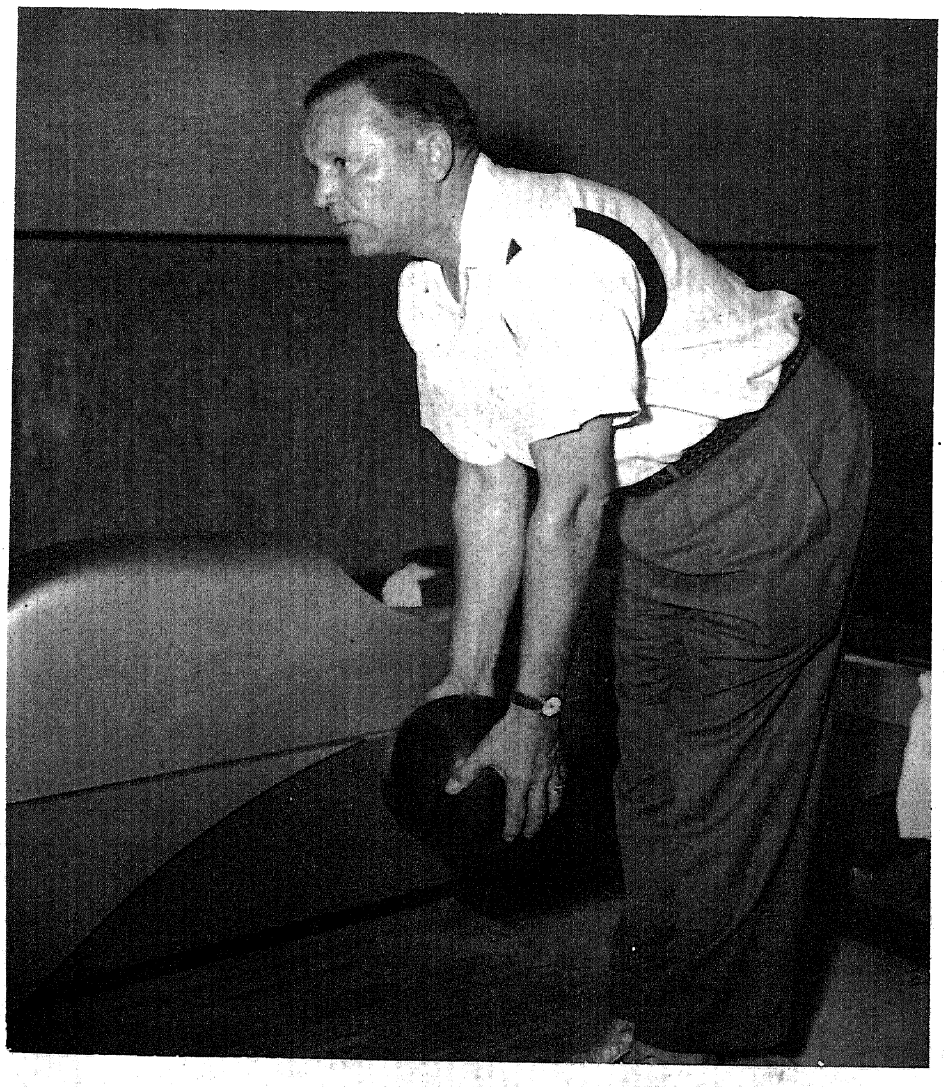


FIGURE 13. *The bend or stooping position on the approach as Junie McMahon sees it. There are variations, of course. This is used chiefly in a three-step approach, which permits little or no pushaway.*

The semi-crouch is a combination of bend and crouch in which the knees are slightly bent, ~~The~~ ball ~~is~~ held below the waist. ~~Some bowlers find that the~~ slight bend of the knee gives ~~them~~ better balance.

The crouch is the extreme position in bowling. The knees are bent almost fully, the body is slightly bent and down, and the ball is held at or below the bent knee, not too far away from the approach floor. Because of the bend of the knee, the ball must also be held forward, away from the body. For reasons that will be discussed later, it is not the ideal bowling stance but if that's the way a person bowls best, then he should do it.

Those are the four positions you can take. They are all used, some more,

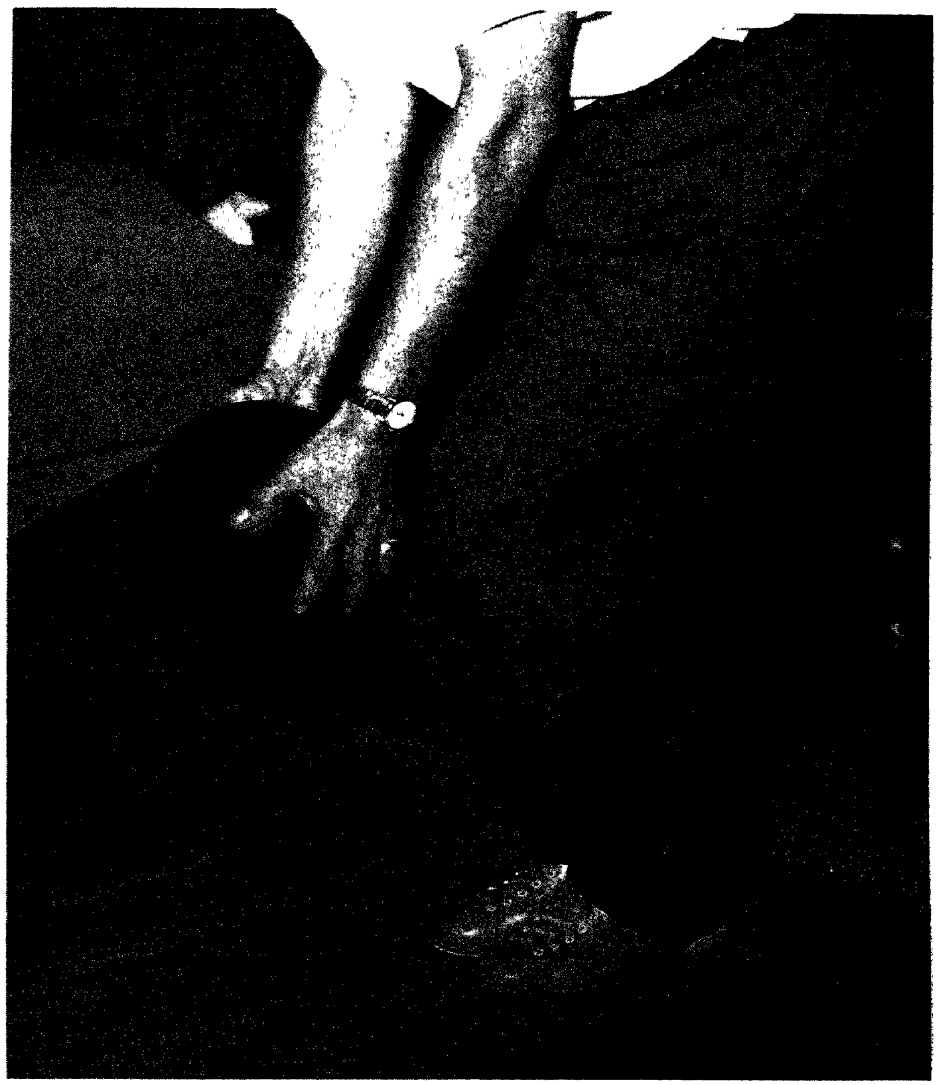


FIGURE 14. *The crouch position, with knees bent, ball held at bent-knee level. Note the position of the feet, close together, left foot slightly ahead of the right. Also, the feet are pointed at the target—be it pin, spot, or line—and the approach dots are used as a guide.*

some less. If it's the most comfortable one for you, take it. But for all positions you must keep in mind that the next point of business is "push away." You must push the ball away from you in order to get it started. Remember,

too, that how high or low you hold the ball in your stance has great bearing on the speed of your delivery, pointing up again the importance of finding the proper stance.

Having learned something about the position of your feet, how to stand, how to hold the ball, and the importance of concentration—all of which are part of stance—it is now up to you to discover where to stand.

Distance from the foul line is something that will be determined both by your physical makeup and by your approach. You may try various distances over and over again until you arrive at the one that suits you best. If you have long legs and take long strides, you probably need more room for the approach than the short, chunky fellow with shorter strides. The approach runway is at least 15 ft. long. You can use all of it or part of it, but a good stance is a distance approximately 12 to 15 ft. from the foul line. That doesn't necessarily mean you have to do it. You'll discover, too, that you'll be measuring the distance not only to the foul line in relation to stance but also where you stand in relation to the gutters, depending on your type of delivery. The number of steps you take in your approach will also be a determining factor.

For the beginner, however, as he prepares for his bowling education, can start with his feet planted some 6 to 8 in. from the right-hand gutter, and the reverse for a left-handed bowler.

You will find many of these items discussed more in detail in future chapters. They are mentioned here to point up the fact that the entire process of bowling is one harmonious operation or should become so when you have gained experience.

Chapter 6

The Approach

In 1948, the year after I won both the American Bowling Congress Tournament singles and all-events titles, and the year before I captured the National Match Game championship, I was ready to quit bowling.

I don't know exactly what happened to me, and to this day I still don't. For some unexplainable reason I was in mental agony every time I stepped onto an alley. My friends and fellow bowlers watched me and could say nothing because they saw nothing. I would start aiming before going into stride; then I would give up and begin all over. Sometimes I made as many as twenty trips to the approach runway before I could release the ball. The "hitch," or whatever it was, confounded me so much that I even went to doctors. Some diagnosed it as nervous reaction but I had never had a case of any kind of nerves on or off an alley. I had suddenly lost my coordination and it nearly drove me insane. The only reason I continued to bowl was to avoid breaking up a team. And as suddenly as it hit me, it was gone, and I could bowl normally again.

This is not the life story of Junie McMahon but a book on how to improve your bowling. I bring this story up only to show the important part coordination plays in bowling.

Coordination begins not with the approach itself but at the moment you take your stance. Everything is intertwined and dependent on something else. You are a machine in which any cog can throw you out of gear or balance. In your stance, the height at which you hold the ball not only governs the controlled speed of the delivery but also your footwork. You must have seen the "aimers" in bowling. They aim and aim, and, like a chess player plotting his next move, they never seem to get going. (That's what happened to me in 1948—I couldn't take off.) You must develop coordination—a smooth style from stance to follow-through that instills confidence in yourself if only by the rhythmic motions you go thorugh. Develop rhythm in your approach and delivery, and you've got nine-tenths of the battle of bowling licked. The rest is practice and more practice.

The approach is not one operation but a series of coordinated movements that lead to release and delivery. It incorporates phases of stance and speed and footwork. The object of the entire thing, of course, from the time you take your stance to the time you are ready to release the ball is to see that your sliding foot reaches the foul line at the same time that your arm is ready to unleash the ball.

The accepted and proven approaches are from three to five steps—depending, as always, on the individual. You must pick the approach that will at all times keep you relaxed because it is not forced, and the one that will bring about the best coordination between arms and feet for perfect timing. It is our suggestion that before you decide on any approach, you take a sample tour of the runway without ball or pins to worry about. Just walk naturally to the foul line and turn around and walk back a few times. See whether your normal stride will get you there in three, four, or five steps. Then try it with the ball to see what happens. That will also determine for you your starting point on the approach runway.

Footwork, though sometimes lost in the use of other phrases in bowling, is as important to the bowler as it is to a runner or a fighter. You should think of footwork as you would of driving a car. Start slowly and gradually work up to a natural speed. The distance you stand from the foul line is, of course, optional. I personally use every inch of the runway, as much as 16 ft. and would probably use more if the runways were longer. But don't imitate me. Just remember that what your feet do must be coordinated with what your hands do. Take off too fast and your approach will lack rhythm.

All steps should be in a straight line. One should walk, not run. Acceleration of steps too rapidly throws the whole mechanism out of kilter. It exaggerates the backswing, speeds up the downswing and delivery, and the person winds up throwing the ball instead of rolling it. Footwork is the base for timing, backswing, downswing, and delivery.

The more steps in your approach, the slower you walk. Don't zig-zig. Point the toes in the direction of the ball trajectory and not necessarily at the pins. It depends on the type of ball you throw. Steps should be natural, not exaggerated—not too long, not too short.

Some adjustment in your footwork may be necessary, depending on how you hold the ball in your stance. If, for instance, you hold the ball high, you must compensate for the height and the large arc of the backswing by either slowing down your steps or lengthening the stride. The reverse is true when the ball is held low. You must either speed up your stride or shorten it. If your physical makeup—that is, your shortness or height—prevents you from making the adjustment by speeding up or slowing down, or shortening or lengthening the stride, you can avoid this by adding another half-step or full-step to your approach. To do this, you may take as many as seven steps to reach your objective even though those steps may all be very short ones. We stress again that the object in the footwork of the approach is to see that your sliding foot reaches the foul line at the same time that your arm is ready to release the ball.

The pushaway, which we touched on lightly in the preceding chapter, is actually the first step in most approaches and should be discussed here before going into the various approaches. We have already said that you must push the ball away to get it started. When you hold the ball above the waist,

the pushaway is with arms extended full length. When you hold the ball below the waist, with the stance in a bend, semi-or full crouch, the pushaway is cut in half; otherwise the arms, if fully extended in that position, would completely throw you off balance.

In the pushaway, never push upwards, always out. Also, if you use an improper pushaway which causes the ball to drop too soon, you will notice that your right shoulder sags and breaks up all the harmony you have so deliberately counted on. The one faulty motion can ruin a game.

To illustrate the proper pushaway, let's compare your bowling arm with the pendulum of a grandfather's clock. The pendulum swings back and forth in a straight, easy line. That's the way your arm should go from the pushaway to the release and delivery—no hitches, no jerks, no doubts.

The three-step approach is rapidly being discarded in modern-day bowling. This is the only approach that doesn't allow for a pushaway. In this short approach, the bowler is virtually compelled to force his way into the backswing immediately. It is a most tiring approach, far from the most efficient or harmonious. The timing on a three-step approach must be perfect. We do not recommend the three-step approach. It is also our opinion that no top bowler who uses this approach will ever win a tournament like the National Match Game Championship, which is bowled over 100 games, 64 of them in the last four days. He will never last.

However, if you decide that the three-step is best for you, you should use a distance of from 10 to 12 ft. from the foul line for your start.

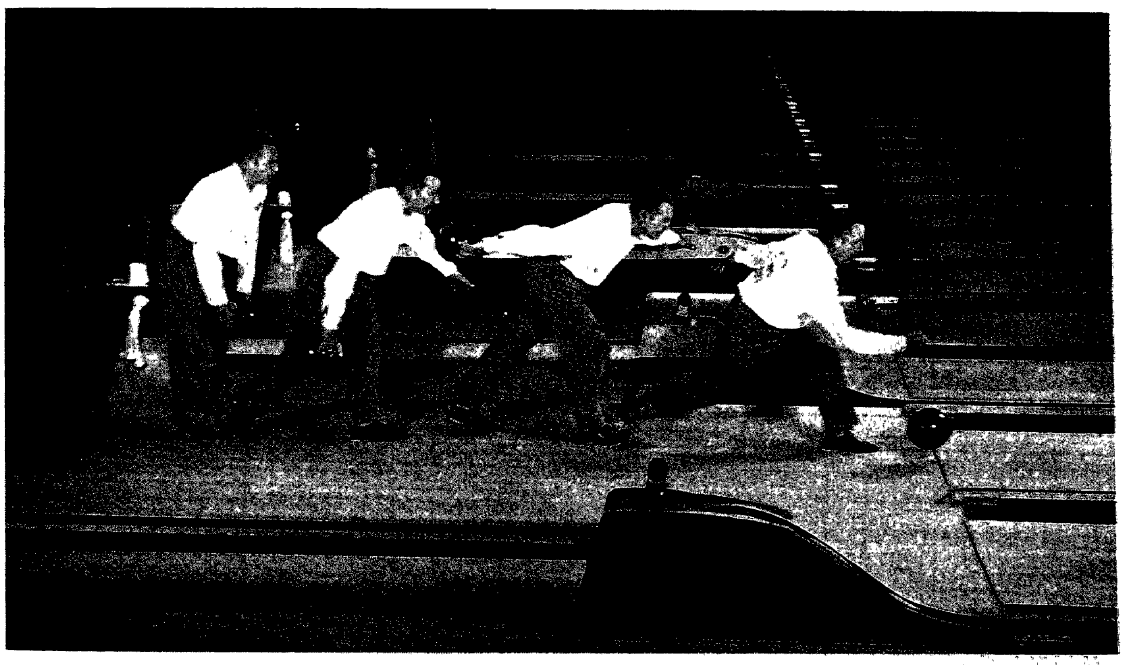


FIGURE 15. *The three-step delivery. Note the right arm goes almost immediately into the backswing on the first step with no visible pushaway.*

Whether you use three, four, five, or more steps, the ball must be beyond the right knee going into the upward portion of the backswing with two steps remaining if you hope to reach the foul line for delivery with arm and foot arriving at the same time in full coordination. We bring this up here to remind users of the three-step delivery that they must achieve that position on the first step, permitting no natural pushaway.

The four-step approach, (or it could be four and one-half or five steps) is more popular because it follows a more natural pattern. You would begin the four-step approach from 14 to 15 ft. from the foul line. Anything over four steps requires at least 15 ft. One of the common faults of bowling beginners is allowing too much or too little distance for the walk to the foul line.

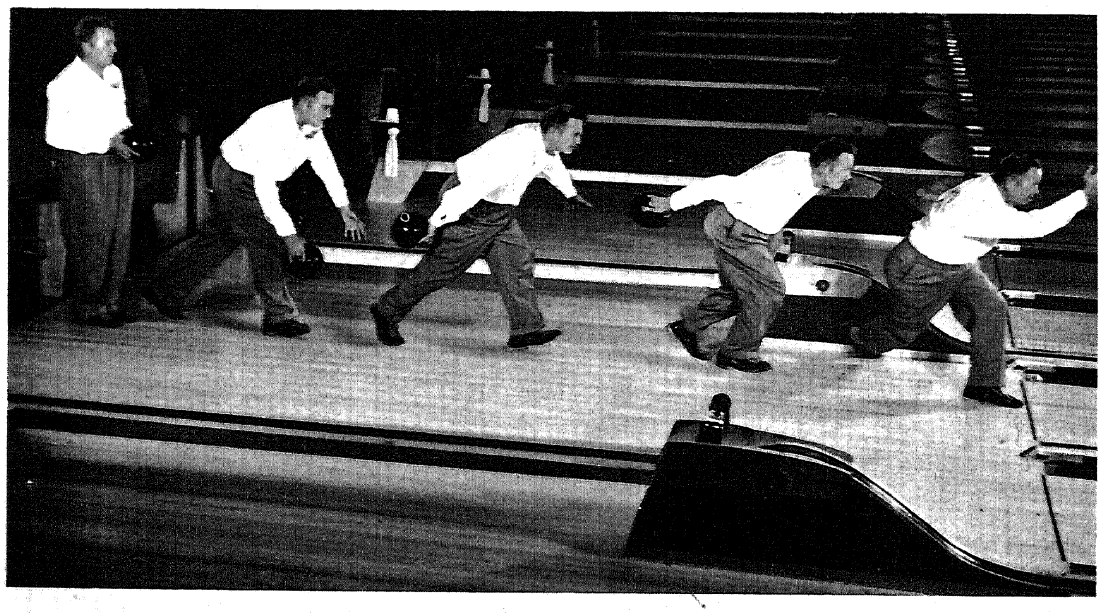


FIGURE 16. *The four-step delivery, demonstrated by Junie McMahon. The pushaway is completed with the first step and the backswing starts on the second.*

In the four-step approach, you start on the right foot, using a medium-length step. On the four-and-one-half or five-step approach, you begin on the left foot, with the first step short, the second medium length. Don't make any stride too long.

Incidentally, all alleys have a clearly marked 12-ft. line by which you can judge your distance.

In the four-step approach, the ball must be passing your right knee going into the upward portion of the backswing on your second step, and if an extra step is used, you should arrive there on the third step. That is the test of whether or not you have proper coordination. If your ball isn't getting there at the right time, you must either speed up your approach, or slow it down, depending on the number of steps you take.

Between your next to last and last step, the ball has reached the peak of

the backswing and is starting down, ready for the release and delivery. On the final step you must have finished the full arc of the pendulum or swing, with the left foot slide coinciding with the arrival of the ball at the foul line, not beyond it.

Your first step is your most important one, regardless of which approach you use, because it triggers the entire approach. Try to synchronize your approach so that you don't land at the foul line abruptly. The slide should be natural, not a sudden jerk that will land you on your face.

It's really not too difficult, if you rehearse it. Take your stance, relaxed, eyes on your objective—pins or spot—in true concentration. Your body is upright, bent or crouched, as you wish. Your knees, though not bent except

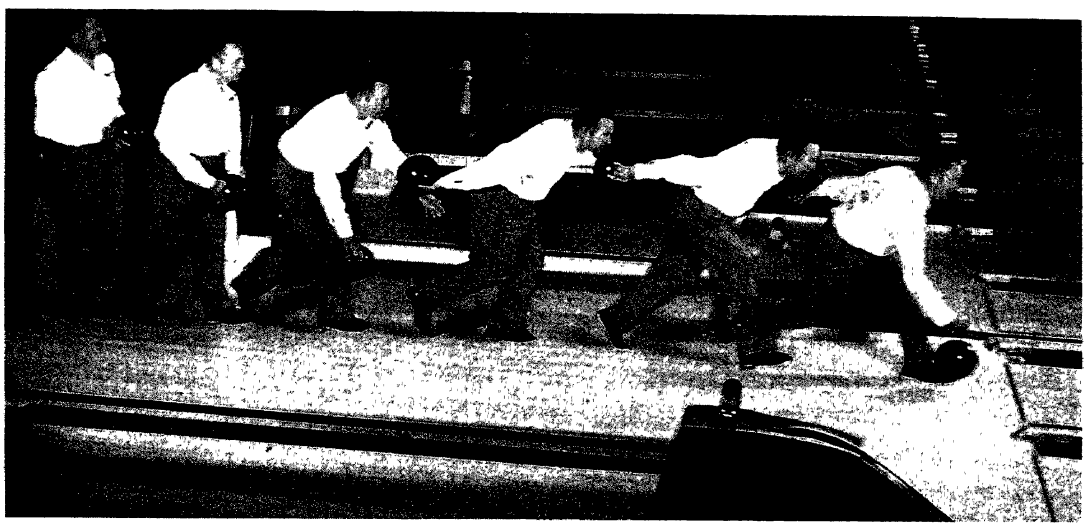


FIGURE 17. *The five-step delivery. The extra step is a short one. Note that in all deliveries the position of the hand has almost reached the peak of the backswing pendulum with only one step remaining.*

in a semi- or deep crouch, are loose, untensed, yielding. Take your first step and push away at the same time—unless, of course, you use a three-step approach. Let that arm, in any case, start the pendulum swinging. Be sure that your motion is decisive. Let your shoulders go with the motion—no sudden sag. Your toes are pointed straight ahead—in a straight line. As you complete the pushaway, the left arm is moving away from the ball, to be extended for body balance. Down goes the ball, into the backswing—not too long, not too short. Then you go into the downswing, completing that portion of the pendulum. Delivery and follow-through come next.

And if we haven't stressed it enough before, make that foul line your guiding point. If you go beyond it with your feet before releasing the ball, then your approach cannot possibly be coordinated and you are committing a foul (although you may not be charged with it in open play). It is best to get into the habit of observing the foul line at the release because, in any tournament, fouls are costly, and also throw you off your game.

Chapter 7

Delivery

Delivery is that portion of bowling comparable to a baseball pitcher unleashing the ball toward a batter or a golfer finally lashing away at the ball. The preliminaries are over. This is the crisis—the moment of action.

The word "delivery" itself is, perhaps, a loose word because it no longer can be separated from the motion that started some 10 to 16 ft. back of the foul line. The delivery begins with the stance and ends with the follow-through. It is the culmination of the relaxed, coordinated, well-timed approach that brings you to the foul line sliding on your left foot and braking with your right. It includes, too, the release of the ball. The type of delivery you make is dependent on all these other factors plus your own natural ability to do "tricks" with the ball.

You must bear in mind that a ball, in order to be effective, must be aimed properly, must have a certain amount of speed, and must also have enough roll or spin to hold the alley as it heads toward the pins. You will get an occasional lucky hit with a haphazard system, but to achieve any measure of consistency you must know what you are doing. The object of a delivery is to knock down all the pins. The type of delivery you use determines your effectiveness, or lack of it. But your entire effort must be coordinated and controlled. That is what you work toward. A wild pitcher with blazing speed is a detriment to a team. A bowler without harmony and coordination and control will not be found among the scoring leaders.

Before tackling the types of deliveries, it may be simpler to go through the motions of bowling in the proper order. You've taken your stance and are now completing the approach, whether it be three, four, or more steps. Now comes a vital portion that is considered part of the approach but belongs just as much to delivery—the slide.

The slide, though the final step of the approach, is the springboard for release and delivery. While we consider every step a most important one, particularly the first, the slide is held by some to be the most important of all the steps. We won't argue the point, but it has always been our contention that if you start off wrong, you wind up wrong. The slide-step, however, is half the battle of bowling. You must slide. The average length of your slide, naturally, varies with your height and stride, but it should be a slide of about 12 in.

The slide finish insures body balance at the line because it ends with the left leg braced, thereby controlling your forward movement. The proper slide will virtually "ride" your body comfortably toward release and delivery and will force your arm to swing straight out with the ball. Learn to slide. Practice it.

Pick a spot on the runway at which to begin the slide and push your left foot into a slide, if you must, at first. You'll find it surprisingly easy, but it has to be smooth and natural, not abrupt or jerky. And the left toe must be pointed straight ahead at the finish or you're not going in the required straight line for perfect balance. The left arm is also extended somewhat to aid balance. Your right foot is, naturally, braking with the toe. In the slide, your left foot is flat, the braking is on the right, on the toe. The left knee is bent slightly, the body bending at the waist. The right knee, of course, is bent and with the right leg moving back for balance and brake, is only about 6 to 10 in. from the floor. The right hand, with the ball, is passing close to your body and should be along side your left foot as the slide is completed. You are now ready for release.

Release covers a multitude of bowling sins, and could get extremely complicated if you let it. We don't want to confuse you with variations. It is necessary, however, to realize that the release is a vital part of the delivery. There are simple proven facts about all releases that will help you with your game and your ultimate score.

You know that the release of the ball coincides with the left-foot slide and that the ball should be released with the slide. Most important is the fact that your slide should end from 3 to 6 in. in front of the foul line.

The head is steady from the moment you start the approach to the finish. Like a golfer, whose head is anchored all the way through the backswing until he hits the ball, the head in bowling is held down and forward with the body, eyes intent on the target—pins or spot. Movement of the head—or not staying with the ball—causes pulling of the ball across the body and affects the entire release and delivery.

In releasing the ball, you will find almost automatically that the thumb comes out first in all types of deliveries, with the possible exception of the straight ball where the thumb and the other finger or fingers come out virtually simultaneously. There is no necessity for a twisting of the hand. There are some who think that you must twist the fingers or wrist or hand to put "stuff" or "english" on the ball. That is far from the truth. The "stuff" on the ball comes from the grip of your fingers and the outward motion of the completed swing of the pendulum.

The ball itself is released at a distance of from 4 to as much as 20 in. beyond the foul line, depending, of course, on the type of ball the bowler throws and also the type of alley on which he is bowling. While the left-foot slide puts him in release position, the right hand follows through with the ball.

Many bowling beginners have a tendency to "top" the ball. They let the

wrist break down and throw the ball from the top. This is what is known in bowling as "top roll." The ball spins but it will not roll straight forward, and if it reaches the pins at all it will have lost all or most of its power. It just doesn't drive through because it has done its spinning on a small axis. In release and delivery, the wrist should remain completely firm all the way through.

"Lift" is an unseen part of release and delivery. It concerns chiefly the part your fingers play in the release of the ball. You feel it but never see it. The action of any ball is controlled by the fingers, granting that approach, release, and delivery have been properly executed. You will discover as you start the pendulum swinging that almost automatically, as you gain momentum, your fingers squeeze the ball and at release impart to it the natural "lift" that makes it work.

The thumb always remains medium loose. The other fingers are the actors. They have the feel of the ball, or if you prefer, the grip of the ball. If you let the ball just roll off your fingers, it will have neither speed nor mixing action. Grip it firmly. Squeeze it. Imagine that you are trying to reach your thumb with the other bowling fingers. Of course, you shouldn't exaggerate this to the point where it becomes uncomfortable. But get the "feel" of the ball and it will be lifted naturally with the momentum of your release so that it will be a working ball no matter what type of delivery you use. There is no necessity of twisting or turning.

As you advance, you will undoubtedly learn about finger-tip grips and other methods all designed to give your fingers greater feel or friction for more "lift" and more mixing action. These methods will be discussed later. It is enough for you, as the novice, to go through the paces with the conventional methods. The main thing to keep in mind is that "lift" is automatic if you proceed properly through release and follow-through.

Types of deliveries are four in number—straight ball, backup, curve, and hook. The simplest balls to deliver are the straight ball and backup and better than 95 per cent of the beginners who walk into an alley for the first time will throw one or the other. The reason for this is fairly obvious.

Most bowlers, rolling for the first time, are scared to death but won't admit it. We are not talking yet of youngsters, many of whom think the game was made to their respective order and come into an alley with more confidence than knowledge. Kids have no fear. We refer, here, to the average man or woman who, for a variety of reasons, dreads his or her first venture in bowling. They pick a ball off the public rack and are mortally afraid that it will stick to their fingers. They are awed by everything, mostly of the possibility that they'll make complete fools of themselves. They imagine that every eye in the alley is upon them and that people will momentarily burst into laughter. If that's your trouble, forget it. Bowlers are too intent on their own game, and troubles if any, to worry about you.

These first-time bowlers pick up a ball that is usually too loose for the

fingers and proceed to bowl. With a loose-fitting ball, they have little gripping power. They grip the ball in the manner which seems easiest to them and invariably will throw either a straight ball or a backup. Some, braver than others, will attempt to imitate something they have seen and will twist the hand or wrist—often with disastrous results.

The backup, which we neither teach nor recommend, is still a method of bowling and should be described. This delivery is a common tendency but uncommon by choice. It has always been the worst and most tiring ball to deliver.

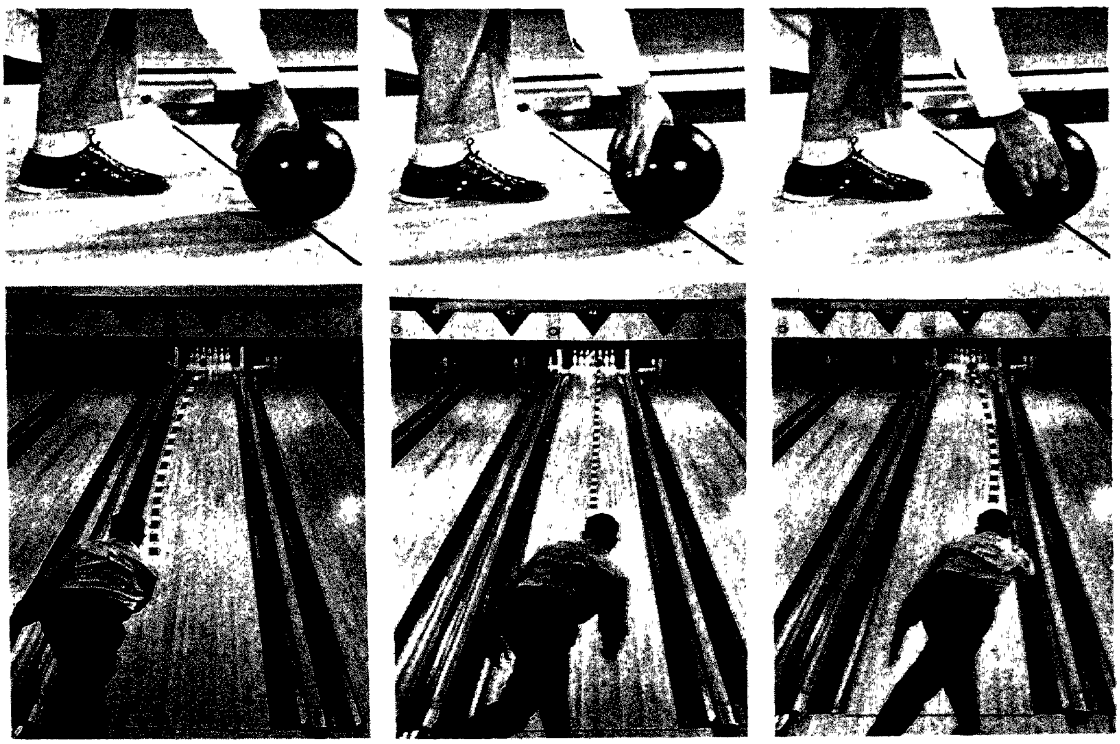


FIGURE 18. *The finger position for the backup and the path of the backup, which is a delivery we do not recommend but which unfortunately crops up in the bowling picture too often, particularly with women.*

FIGURE 19. *The straight ball, most popular and most recommended for beginners, and its direct road to the pocket. Note the finger grip has the thumb facing directly ahead, in line with the target.*

FIGURE 20. *The path of the curve ball and the "V" position of the hand on release of the curve. The hook ball hasn't the traveling arc of the curve but breaks in sharply as it grips two-thirds of the way down the alley.*

Imagine a ball thrown by a left-handed bowler rolling right-handed. That's the way it works. The backup is exactly what it says it is. It starts from the left and backs up to the right, the reverse of the curve. Gripping the ball for the backup, the hand is almost directly under the ball, with the thumb pointing at the pins and in a position that would be 1 or 2 o'clock on a timepiece. A left-to-right twist is necessary to give it the reverse spin. Women, with their

arms naturally tending to turn out, are particularly vulnerable. They find it an easy grip and it is more difficult to break them of the habit. The backup is neither accurate, fashionable, nor pin-getting. If a bowler finds himself throwing one, he should correct it as soon as he can.

The straight ball is also what its name implies— a ball thrown straight at the pins. Because it is a natural delivery, the straight ball is the easiest to throw and control. While we recommend that it be released from the right side of the alley, aimed at the 1-3 pocket, it can be delivered from almost any point or spot. The ball is gripped in what we call the "11 o'clock" method, with the thumb held pointed at what would be the figure 11 on a clock dial. This brings the palm practically behind the ball. It is a ball that depends entirely on accuracy. There is no turning or twisting of the hand to the left, and no lift from the fingers. The thumb and other finger, or fingers, come out almost at the same time.

Since all straight balls have a tendency to back up slightly, unless it is an exceptionally fast ball, there is always the danger of missing the head pin or pocket, or of hitting the head pin dead center, causing the agonizing splits that bowlers dread. It is a deflecting ball rather than a drive-through ball.

However, the straight ball, properly executed, is not a bad delivery, and its use is highly recommended for beginners. In fact, many top bowlers switch from curve or hook to straight ball for many spares. It is not the best of pin-scattering deliveries, but it will groom one for the more advanced stages of bowling.

The curve and hook are bowling's most effective scoring deliveries. There are those who insist they are entirely different and separate deliveries. We contend that they are almost similar in the way they are delivered and the way they roll, even though the speed and trajectory of the two balls are different. Rather than start a controversy, we shall treat them separately.

The hook is a turning ball, with more revolutions and faster than any other delivery. It is thrown out of the side of the hand or by what is termed in bowling as the "V" method. The thumb is in a position alongside the hip, pointing at what would be approximately 10 o'clock on a watch dial. The "wish-bone" of the thumb is held parallel to the foul line. The thumb, of course, is released first. The remaining finger, or fingers, give the lift or turn to the ball. The wrist has absolutely nothing to do with it.

Unlike the straight ball, where all fingers release virtually simultaneously, the hook has a delayed release with the other fingers following the thumb. This causes the counterclockwise turn that gives the ball the spin resulting in the hook. The greater the turn, combined with the particular grip, the sharper the angle of hook.

Hook-ball bowlers take a stance on the approach runway anywhere from 8 to 12 in. in from the right side. They generally aim at a spot or on a line with the 3-6 pocket. The ball travels nearly two-thirds of the alley in what is almost a straight line then hooks in sharply toward the desired 1-3 pocket.

The curve is a slower delivery and rolls more. It covers more alley than the hook, because of its wide arc, and it must be thrown from a stance closer to the center than the hook. Those who throw what we call a large curve should be anywhere in line with the head pin or maybe even slightly to the left of the head pin.

The curve is thrown almost the same way as the hook, although some top bowlers turn the hand so that the thumb is facing 9 o'clock instead of 10. With the curve, aim is taken at a spot about 10 to 12 in. in from the right, which also is similar to the hook. The degree of speed, which causes the slower curve to roll and the faster hook to turn, and the angle or trajectory of delivery are the chief differences. In fact, the hook has been called a sharp-breaking curve.

Which is better is a matter of opinion. We prefer the hook because it has proved easier to control. The farther to the left one goes, the more difficult it is to control the ball, for it will have a tendency to lose the "working stuff" that is needed to carry or drive it through for those important strikes.

The value of the hook over the curve lies in the degree of "spin," making, figuratively, a "large pocket." An effective hook will get strikes even on thin hits because of the degree of "spin."

We are not suggesting here that you discard your straight ball for the hook or curve. If you can progress from the straight ball to a short hook or a simple curve in a short span of bowling time, you have accomplished a tremendous feat.

Speed of delivery is not to be confused with the fastness or slowness of your stride in the approach. While we have already explained that how high or how low you hold the ball in your stance affects the speed of your delivery, everything can be summed up simply by stating that it is always best to be natural with regard to speed: not too fast, not too slow.

The speed ball pitcher will throw few strikes in bowling. It must be emphasized throughout that the speed of your movements, in approaching the foul line, in your backswing and outswing, and in your delivery, governs your timing and direction. Speed is adjustable and you have to determine from your own faults whether or not this factor is spoiling your game. There's that old bowling axiom: "Don't try to knock the building down, just knock down the pins." That is possibly the best advice that can be given to the bowler who would build up his score, not his muscles. Speed should be controlled speed.

Direction includes aiming the ball, and, naturally, control. Your choice of ball, your stance, your aproach, release, and delivery—all of these factors help to determine direction. It, too, is something you gain from experience and adjust as you learn.

Follow-through is the completion of the process of bowling. You cannot start a motion and end it abruptly if you want to be a good bowler. That's where the follow-through comes in. The follow-through is the final swing of the

pendulum that started in the center and completed an arc. It is almost as important as all the steps and maneuvers that preceded it.

After the ball is released, you should maintain your form throughout the follow-through. The left foot should be just back of the foul line, pointing almost straight for the head pin. Keep the right foot in a natural position to maintain balance. The right arm should follow through after the delivery of the ball until it reaches about the level of your eyes, and straight ahead. Remember to keep the right arm directly in front of you, not pulled across the body to your left side—or angled off to the right.

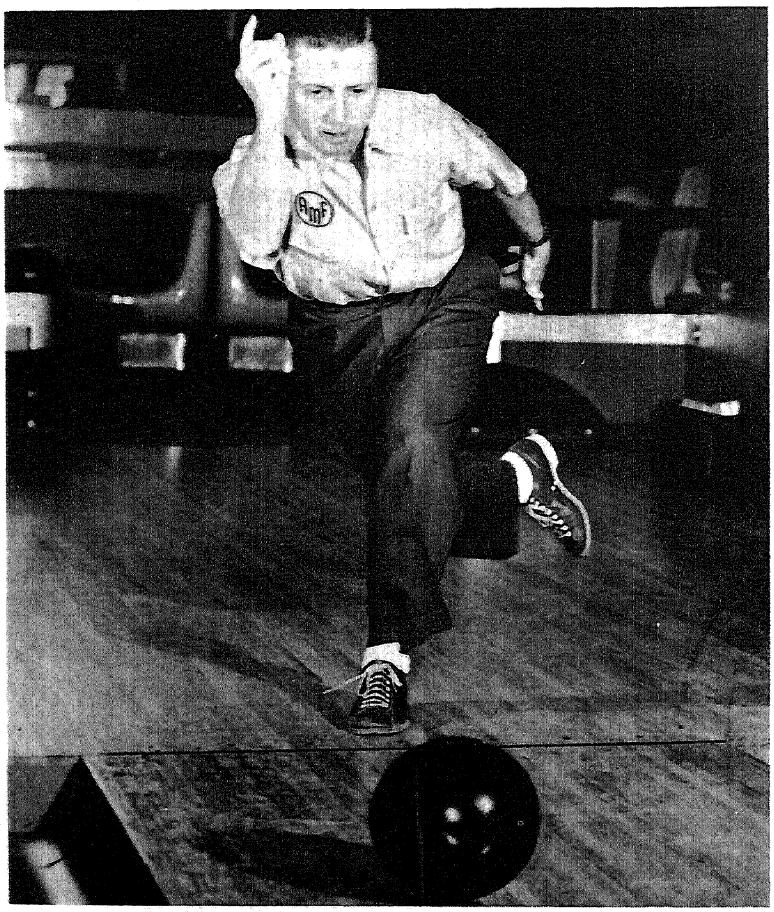


FIGURE 21. *Tony Lindemann, of Detroit, another of the country's top bowlers, has just completed his delivery and is in the perfect "salute" follow-through with the right hand at eye level, the right foot and left hand back for perfect balance.*

With the proper follow-through, you will note that your right foot almost automatically kicks back to help maintain balance, and your left hand also goes back, naturally, easily. This is all part of coordination, timing, balance. Some bowlers wind up in a variety of positions thereafter, as some of the accompanying illustrations indicate. These styles are peculiar to each indi-

Courtesy Sports Illustrated

FIGURES 22-25. *After the ball is released, many bowlers cannot resist the use of a little "body English." Such a maneuver has never been known to change the direction of a ball, but as a piece of showmanship it undoubtedly has spectator appeal.*

vidual game, and it is not intended that they should be copied. They are just to show that a bowler, with the proper delivery and follow-through, must go all the way—some to greater extremes than others.

Playing alleys is another portion of bowling that will become a major problem as you go along. How many times have you heard a friend exclaim in disgust: "I just can't seem to bowl on this alley"?

Of course, if you are just a casual bowler, playing at the same alley every week or whenever you do, this may not be of vital importance to you. However, you will find that even the alley you're used to undergoes changes from time to time. Alley conditioning is a daily necessity to keep them properly. They have to be swept and kept clean, and the more activity on any alley the more the need for better maintenance. You will discover that bowling at night is different from bowling in the daytime. In the daytime, the alley is comparatively fresh. By nightfall, it has been rolled over many times. You will find your regular delivery doing unexpected things. And if you branch out and get into tournament play at different establishments, you'll be a little bewildered by the fact that your ball will not behave in the accustomed fashion. Atmospheric conditions, too, can play havoc with a bowler's consistency. Changing alley conditions has long been one of the perennial hazards of bowlers—beginners, experts, and otherwise.

Playing alleys properly is a knack you acquire only from long experience, but there are general rules by which you can guide yourself. Play your natural ball on a new alley until you find out whether the ball hooks or curves sharply or slowly. If your natural ball is finishing into the head pin too full, first try increasing your speed a little. If this does not help, move over toward the center, thus changing the angle of your delivery slightly and preventing the ball from breaking too quickly. If you have trouble getting your ball up to the head pin, slow your ball down, or move to the outside. Of course, if you have no trouble, you are luckier than most of us.

Chapter 8

Pin, Spot, or Line?

This chapter's title ends in a question mark because the answer has yet to be supplied as to which is the best system of bowling—pin, spot, or line. It is the oldest debate in bowling and until electronics takes over and guides the ball to the pocket on a radar beam, it will never end. There are stout champions for each system and the only determining factors are varying scores. Although you'll find more spot bowlers among the better ones, it does not necessarily prove that this system is best. Lee Jouglard, a great bowler and one of the finest teachers in the country, is a pin bowler. Joe Wilman, another master, virtually preaches the line system. I switched from pin bowling to the spot method because I discovered it was more suited to my particular delivery. And that's the way it should be for you: whichever system works, use it.

Actually, this discussion belongs to delivery since it is all intertwined with footwork, aim, direction, release, and delivery. Yet, we feel that it has an importance all its own because it brings up or emphasizes the object of the game—getting as many strikes, and spares, as is possible.

1. **Pin bowling** is the natural, instinctive method of bowling. It is that school of thought which states that since the intention is to hit the pins, paricularly the 1-3 pocket, the bowler must keep his eyes on the pins and draw an imaginary line to them.

We recommend pin bowling for the beginner because it is easier, demands less concentration, and allows for errors, among other things, in timing and approach that the beginner will usually encounter. Perhaps he has difficulty in making his approach in a straight line. Maybe he has trouble in controlling his speed, both in footwork and delivery. Then again, the hand position may be off. Pin bowling, while used by many experts, does not penalize the bowler as much for mistakes since the eye is on the 1-3 pocket target and not on a precise spot or line. It is effective with a straight ball and a slight or short hook, or with a really fast ball.

2. **Spot bowling** is a more exacting system. For the average bowler it may still be trial and error, but, for the top bowlers, it is a science. It demands perfection in all phases of bowling from starting position to finishing position. For each roll a person must be able to start the same way, from an identical point, and finish the same way at the foul line as he releases and delivers the ball.

The so-called pure spot bowler picks a spot where he wants the ball to hit and never varies once he has decided that this is his strike target. On new

alleys, using the rangefinder markings (see illustration), the spot could be on a particular arrow or on a board between arrows. On the older alleys, it could be a particular board.

Once that spot has been chosen, the bowler never takes his eyes off it from the time of the stance to the delivery and follow-through. Adjustments are made by changing the starting point of the approach, not the spot. Others adjust by changing the speed of the ball—slower or faster.

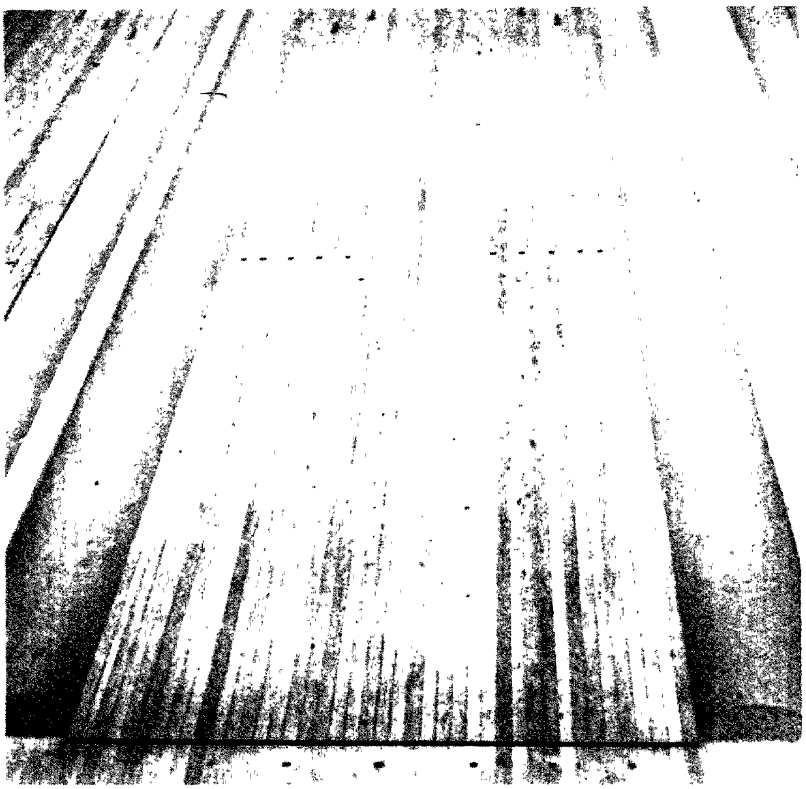


FIGURE 26. *Note the seven range-finding darts, and the dots on the alley, as well as the dots in front of the foul line. The darts and dots on the alley are used in spot and line bowling. The dots at the foul line, as well as a similar set at the start of the approach, are footwork guides.*

There are spot bowlers, however, who use a "flexible" spot, or two spots, as a safety factor. They pick one spot at which to lay the ball down, and another over which it should roll. While this imaginary line is not as completely drawn as is the one created by the pin bowler and the line bowler, it does add an extra check point that the true spot bowler does not have.

The average spot bowler rolls at a spot from 8 to 12 in. from the right-hand side of the alley. The spot itself can be just over the foul line, 6 in. away, or even 2 ft. away. Those who use the flexible two-spot system can use one spot just over the foul line, and another as far as 20 or 30 ft. away.

He doesn't just drop the ball on the spot. He rolls it, swinging through

naturally with the follow-through that gives lift and spin to the ball with finger action and elbow bend.

Because the spot is the target and the key to the delivery for the true spot bowler, he must make adjustments by changing the angle of delivery and not the spot—or, as we have said before, by speeding up the delivery, slowing it down, or changing position at the approach.

The line bowler is a combination of pin and spot bowler. To achieve high scores, he knows he must aim for perfection in stance, approach, and delivery, but he also feels that it is wise both to pick a spot on the alley over which to bowl and to be able to see the 1-3 pocket at the same time. His line starts at the stance position and ends in the pocket, ~~or so he hopes~~. In order for him to see both the spot he has chosen and the strike pocket, his spot, of necessity, must be farther down the alley—anywhere from 2 ft. past the foul line to three-quarters of the way down.

Like the pin bowler, the line bowler has drawn his imaginary line, although his has four check points: the starting position, the finishing or slide position, the chosen spot, and the strike pocket. Unlike the true spot bowler, who will rarely if ever change his spot to meet alley conditions, the line bowler's line of delivery is flexible. He can change the angle of his line by picking another spot or board over which to roll and amend his other check points to suit the new spot, keeping in mind always that his ultimate target at the end of that line is the 1-3 pocket which he never loses sight of completely. The line bowler cuts down the margin of error with less trial than the pin bowler. There is less instinct and more precision required for the line bowler.

You can create all sorts of arguments for all three systems, but the score and the degree of consistency is still the determining factor. Start with the pin system and try the others gradually. You will find the one you like because it fits your style and score. Once you feel you've found it, don't change for every delivery. Stick to it. That's the only way to develop coordination, timing, complete harmony, and—most important—confidence.

Chapter 9

Strikes and Spares

Because it is subject to the unwritten laws of competition, and because perfection is so difficult to attain, bowling is a great sport.

Every new game carries with it different conditions which produce variations in the scores. If everybody bowled 300 every time out, the element of competition would disappear. Combine the human elements of emotion, concentration, physical stamina, courage, and determination with "luck" or "breaks," and anything can happen on any given occasion. That is why some bowlers hit 200 one game, and 150 the next.

Depending on how seriously you take your game, each appearance at the approach runway could present a new problem. Your relaxation may turn into tension. Your muscles may and do tighten. The ball seems to get heavier and more difficult to release with the same free and easy motion as the pressure mounts. That is bowling.

The words "average" and "consistency" mean a great deal in bowling. You are not rated on a single game but on your average over a reasonable number of games. And you cannot possibly build up a respectable average without consistency. When you fall down in one game, you must score higher in another. If you are a beginner it is well to remember this counsel. You will be easily discouraged and lose interest in the game, even though bowling for the fun of it, if your performance is continuously low.

The difference between a good game and a bad one is the number of strikes and spares you make. While the strike is always the primary object, the spare is just as important. One miss can ruin an entire game.

The strike is the home run of bowling. It is the goal of all bowlers, some of whom become so intense in their efforts to get strikes that they forget everything else. There are no rules on how to get strikes nor is this knocking down of all ten pins with the first throw of each frame a matter of accident. There will be occasions when you get perfect hits, or lucky ones you don't deserve, but these will not happen too often. In order to get your share of strikes, you must know what you are doing. If at least you know what it takes to get there, your chances are automatically enhanced by that knowledge. The rest is entirely up to you and the amount of practice you wish to devote to the sport.

You must strive for perfection of your stance, approach, delivery, and follow-through before you can hope to put strikes together with any semblance of consistency. You must learn to coordinate your efforts of hand and foot, to aim properly. You must know what to do if your ball is not going where you want it to go. We have already explained that the more spin or lift you can give to a ball, the better your chances of striking, but that can only happen if you have learned to control such deliveries as the curve and hook. Do not sacrifice your whole game and the chance of learning it properly by using deliveries you cannot control just for the sake of getting an infrequent strike.

You can get strikes by either hitting the 1-3 pocket or the 1-2 pocket, which, for a right-handed bowler, is called a "cross over," or "Brooklyn," hit. And you must realize that while your objective is always one of those pockets, the 5-pin directly behind the head pin is really the "King Pin" of the set-up, and must be hit properly to result in an effective throw. "Cross over" hits are not as consistent in getting strikes and are dangerous if missed because they often produce aggravating splits and spare leaves.

It might be both interesting and helpful if we can picture, pin by pin, what occurs when a strike hit is made in the 1-3 pocket. Let's follow the ball through and see exactly what does happen. The ball hits into the 1-3 pocket, carrying into the important 5-pin and deflecting off to hit the 9. The headpin, or Number 1, takes out the 2-4-7 line, while the 3-pin takes the 6 and 10 pins. The 5-pin is responsible for the 8. That, of course, is the portrait on a good hit.

It is easy to see now what happens on hits that are either too full or too thin. This chain reaction started by the ball goes off in an entirely different pattern. Hit the head pin too thin and both angle and deflection produce different results. Hit it too full and it goes off on another tangent.

We point this out only to show that strikes are not a matter of luck. Of course, aiming for them correctly may not necessarily make you the strikeout king but it will help you get more "wood" on your deliveries and, naturally, leave less pins to topple in your try for a spare.

Spares can make you a good bowler or keep you bogged down with the average and even below that. While strikes can be considered luxuries, spares are necessities in the sport of bowling. It isn't often realized that getting a spare in every frame could result in a score of 190, or thereabouts, which is highly respectable. Add a few strikes to these spares, and you have an over-200 game.

The beginner, however, and even the average bowler, make the same mistake as the "head hunter" in boxing. The latter is so anxious for the knockout blow on the jaw that he neglects the vulnerable body. So it is with many bowlers. They make the spares secondary to the strike and miss too often.

There are many schools of thought on what to do with the variety of spares or "leaves" that can present themselves in any one game. There are some

who say one should move with the spare, and there are more who will advise moving away from spares. And there are those who will advise you to move only with the corner spares and to play all others from your normal strike position. All of this advice has some merit, but only a person's own results and the type of delivery he uses can determine what is best for him.

However, before discussing the various types of spare possibilities and how to approach them, we offer some basic bits of advice that can be useful and should be followed. On single-pin spares, try to hit dead center. The target on any one pin is actually 23 in., or close to it, as we pointed out before. Don't be satisfied with just knocking the pin down but try to hit it right where it should be hit. This will not only improve your control on all shots but also will reduce the chances of missing the spare. Think of hitting a one-pin spare as you would shoot a gun. Your right hand, after releasing the ball and completing the follow-through, should be pointed directly at your target.

On the principle that you should use as much of the alley as is possible, we personally advise rolling for most spares at cross angles. In other words, when going after the 10-pin, move over close to the left edge of the alley, and, for the 7-pin, to the right edge. For spares in the center of the alley, stand in the middle, or close to it. If you throw a straight ball,you throw it directly at the objective, naturally. If you throw a curve or hook, you throw the ball a little to the right of the object pin or pins. The exact angle depends on the type of ball you deliver.

Angle is the important thing in spare-shooting, perhaps even more vital here than it is in the strike delivery. Get the correct basic angle, face your target—whether it be a spot, a line, or the pins—shoulders square, feet pointed at the objective. Walk in a straight line toward the target at the angle you have chosen and follow through the same way, at the target. Zig-zagging affects the angle. It doesn't matter whether you are a pin, spot, or line bowler. The only difference in the shooting of spares and the type of system you use is the angle of your delivery governed by your type of delivery.

All spares are tough to make—even the easy ones. You must concentrate as much on the one or more pins remaining as you would on the ten pins.

Single-pin spares appear simple but they are not at all easy. Even with that big target—5 in. for the peak width of the pin and 9 in. of the diameter of the ball on either side of the pin—bowlers good, bad, and indifferent continue to miss. The good bowlers miss primarily because of overconfidence and failure to concentrate. The others miss because they have not learned to angle spare shots properly.

The 1-, 2-, and 3-pins are comparatively easy to knock over because they are part of the strike pocket constantly aimed at. A good many misses, however, occur in bowling at the 4-, 5-, or 6-pins, or the 7-, 8-, 9-, and 10-pins, because bowlers do not realize that their normal delivery must travel a greater distance to get to them. A hook or curve ball bowler must adjust his delivery or angle to overcome that extra distance. A proficient straight-ball bowler

has less difficulty and more percentage on those spares. A change of angle is necessary for all types of deliveries—depending on the leave, of course.

The meek-looking 10-pin, which seems to remain standing more often than any other single pin, is the most difficult for the beginner as well as for the more advanced bowler. Unless a bowler throws a perfect straight ball, it is almost impossible to get the 10-pin from the right or normal side for the right-handed bowler. There is not enough target to shoot at and not enough of the alley to play with. We recommend cross-angle shooting at the 10-pin for all deliveries.

Two-pin spares are common in bowling and create different problems, of course. Strangely enough, by comparison, they are easier to handle since one pin helps knock over the other. But there are pitfalls like the "cherry pick," or hitting the front pin too full, wherein the other pin is missed entirely. Too thin a hit will also slide the front pin into the gutter without even touching the remaining one.

If you'll follow the simple rule of cross-angling, you shouldn't have too much difficulty after a while.

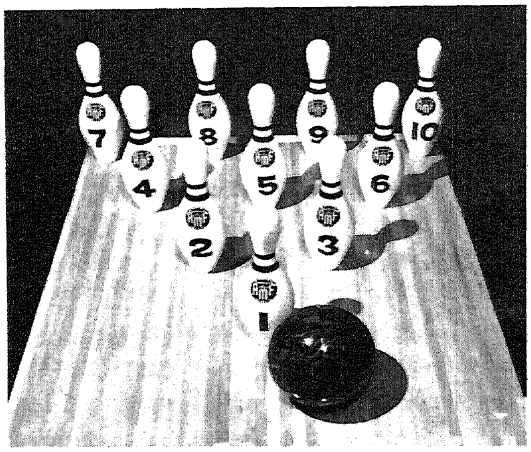
Double-wood or tandem spares is a menace that occurs frequently in two-pin leaves. It means simply that one pin is directly behind another, as with the 2-8, 3-9, or 1-5 combinations. A full hit is almost necessary on double wood. Double wood, naturally, can and does often involve more than the two lined-up pins, as in 1-2-8, 1-3-9, or 1-5-8 or 9, or variations like the 2-4-8 or 3-6-9. In all these instances, don't depend on deflection to make the spare for you. Keep remembering that in all instances involving double wood, a full hit is needed to sweep the board. Doing that will reduce the margin for error. Always try to cover the back, or hidden pin, with the ball.

The more pins you leave standing ,the more chance there is of missing your spare although you may be deluded into the thought that they provide a larger target. You are always open to the "cherry pick," to bad angling causing improper hits, and to the ever-present slow or fast alley that is constantly changing. Proper angling almost always controls the pin action and leads to deflection in the right direction for the particular type of spare.

While we advocate the cross-angle system for most spares because it gives you the most alley to play with, there are other ways to play spares and you can determine what is best for you through practice and trial and error. In the instance of the 2-4-5 spare, some experts advise bowling from the left side to eliminate the possibility of a "cherry pick."

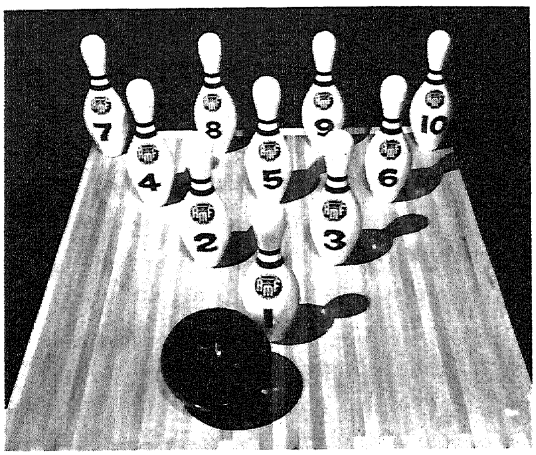
The ensuing series of diagrams and pictures will point out clearly the variety of spares you shoot at and the ways of making them.

The split, big or small, is the most agonizing of all spares to shoot at. Of course, all are possible. For the beginner, most are improbable. If the head pin is still standing, there is no split despite the gaps between the remaining pins. Splits can be as far apart as the 7-10 pins, or as close together as the "fit-in" 5-6.



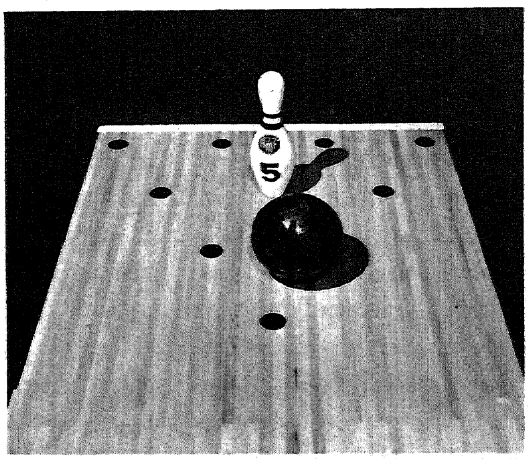
Courtesy Rosen Studios

FIGURE 27. *The 1-3 "strike" pocket. It doesn't matter whether a straight ball, hook, or curve is thrown, this is where the ball should hit for any degree of strike consistency.*



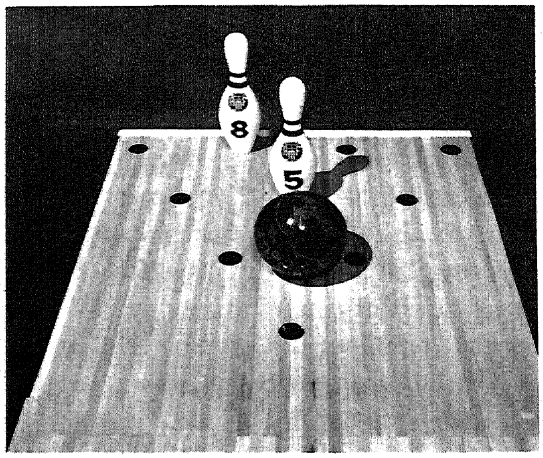
Courtesy Rosen Studios

FIGURE 28. *The "Brooklyn" or crossover strike hit landing in the 1-2 pocket. Of course, for a left-handed bowler, this is ideal. For the right-handed one, it is not the recommended way of getting strikes, but it does happen.*



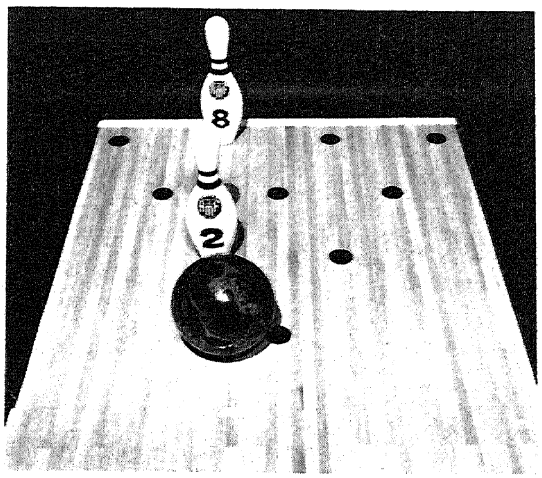
Courtesy Rosen Studios

FIGURE 29. *Single-pin shares. As the illustration shows, the pin should be hit as near to dead center as possible, in order to reduce the margin or error. We recommend using as much alley as possible on all spares. Shoot from the right at pin 1, 2, 4, 5, 8, or 7, and from the left at the 3, 6, 9, or 10 pin. Of course, if you choose to move with the spares instead of away from them, that is your option.*



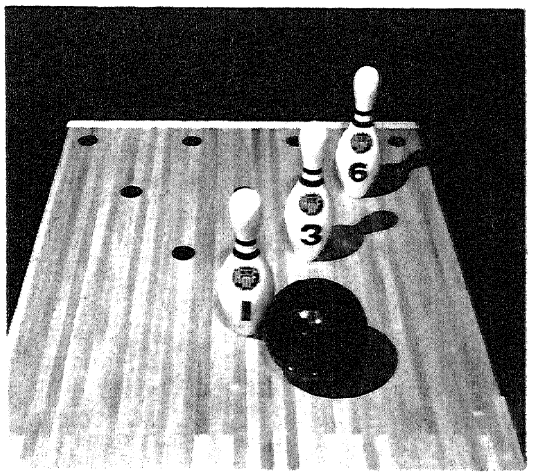
Courtesy Rosen Studios

FIGURE 30. *Two-pin spares. Example of a simple two-pin leave. You can get a two-pin leave either by having the ball take out both pins or by hitting the front pin so that it takes out the one behind it. Follow the same principle here as you would with single pins. Give yourself all the alley room you can.*



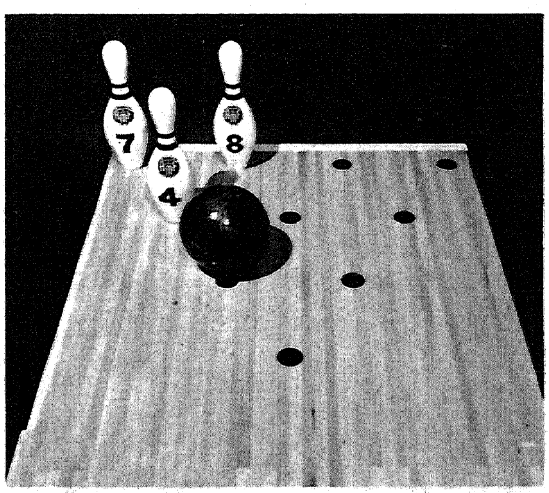
Courtesy Rosen Studios

FIGURE 31. *The 2-8, 1-5, and 3-9 spares are double-wood or tandem leaves. In all cases, the ball must hit the front pin full in order to take out the back one.*



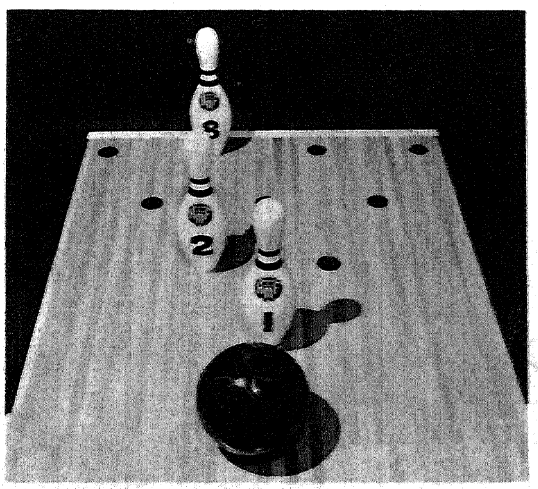
Courtesy Rosen Studios

FIGURE 32. *Common three-pin leave. The safest way to play it is to aim for the front pocket, as indicated. It can be made, of course, by angling the ball so that it hits the front pin into the other two, but the chances of missing this way are far greater.*



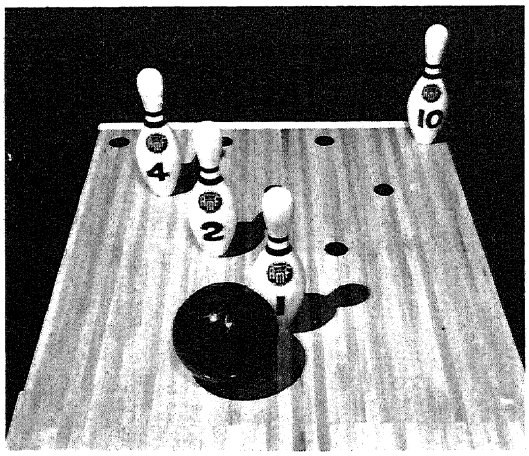
Courtesy Rosen Studios

FIGURE 33. *The 4-7-8 and 6-9-10 spares are not too difficult and occur quite often, as do the 2-4-5 and 3-5-6 combinations. The illustration points up the proper way to play them. Our recommendation, as always, is to shoot from the left at right-side spares, and from the right at left-side spares.*



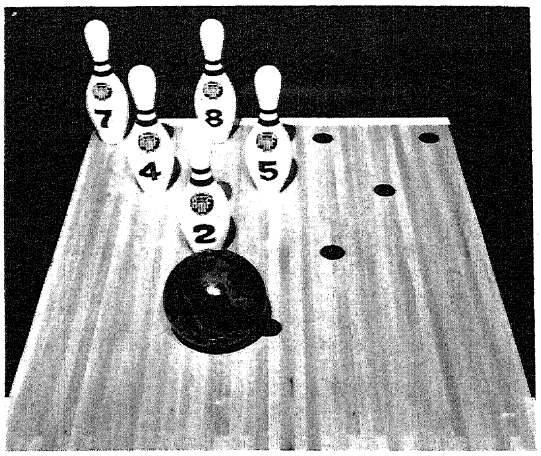
Courtesy Rosen Studios

FIGURE 34. *Three-pin spares are fairly common when the head pin is missed and often involve double-wood. In the 1-2-8 and 1-3-9 combinations, the ball must angle off the one-pin so that it hits the next pin full, in order to take out the back pin.*



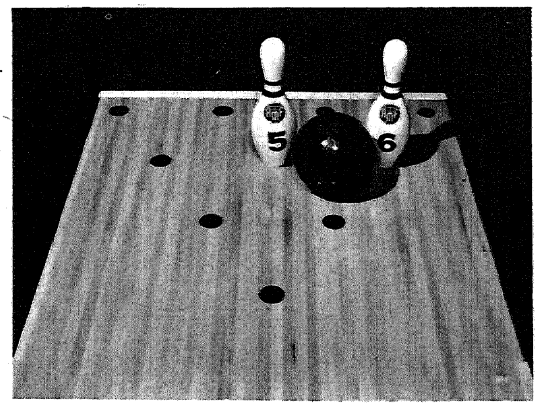
Courtesy Rosen Studios

FIGURE 35. *This leave is called a "washout" and, despite the gap between the 1 and 10 pins, is not called a split. It has to be hit as shown for the 1 to deflect across to remove the 10, while the ball erases 2 and 4.*



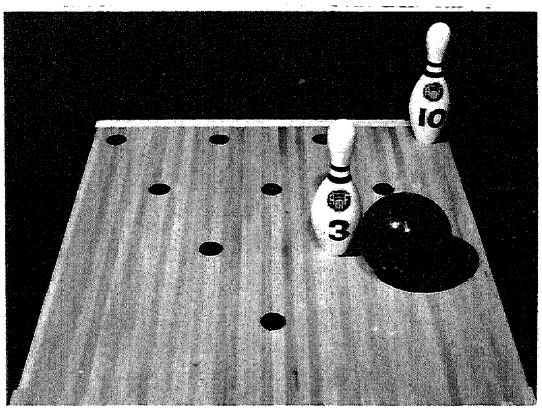
Courtesy Rosen Studios

FIGURE 36. *The beginner and even the average bowler will find himself confronted on more than one occasion by remaining clusters of four and five pins. They occur on light hits without too much "spin" or "lift" to the ball. They are, strangely enough, comparatively easy and can be played in several ways (the best methods are shown here). There is always a danger of a "cherry pick" on too thin a hit.*



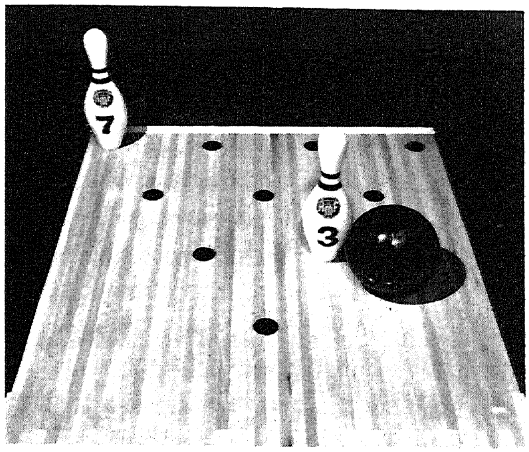
Courtesy Rosen Studios

FIGURE 37. *The 5-6 and 4-5 leaves, as well as the 9-10, are called "fit-in" shots. They can be made by fitting the ball between the two pins. Although it is possible to graze one pin so that it slides across into the other, the chances are so slim (even for the better bowlers) that this is not advised at all.*



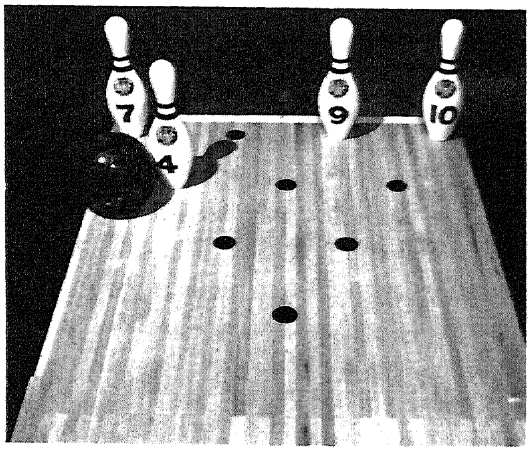
Courtesy Rosen Studios

FIGURE 38. *Example of a "baby split." It is not as difficult as it appears. The surest method is to angle off the 3 into the 10, shooting from the left side. It can also be made by deflecting the front pin into the back one, but that requires perfect hitting.*



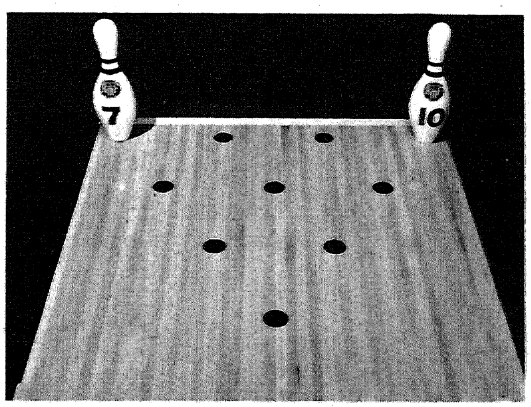
Courtesy Rosen Studios

FIGURE 39. *Deflection plays the only role in a "railroad," which becomes more difficult as the gap widens.*



Courtesy Rosen Studios

FIGURE 40. *Another example of spares which can be made only through deflection. Some are more probable than others, but all require almost perfect aim and hit.*



Courtesy Rosen Studios

FIGURE 41. *This is the ultimate in splits. When you see the 7-10 remain standing, try for one or the other. It has been made, but the odds are much too long. It's always better to get one pin than none at all.*

Fit-in shots—the 5-6, 4-5, 2-3, 7-8, 8-9, or 9-10—are played as you would any other spares: cross-angling and aiming between both pins or at a spot or line that will get you there according to your type of delivery. They are not as simple to make as they appear, because it takes especially accurate shooting. For those in the corners, move to the right or left edge of the alley, depending on the leave. For those in the center, move toward the center. This is one of the few instances where we encourage moving with the spare.

The 5-6-10 and the 4-5-7 splits are variations of the fit-in shot, as are the 3-9-10 and the 2-7-8. The addition of the third pin makes the shots more difficult but they are attainable. Where the fit-in is in front, it is played as if the third pin wasn't there. Where the fit-in is in back, the 2- or 3-pin is hit full on the right side. The ball will deflect and take out the other pins.

The baby split is a common leave and is caused by hits either too full or too thin. It can be the 2-7 or the 3-10, and they are easier to get than others. Since a person is shooting at cross-angles, he aims at the space between the pins. Attempting to hit the front pin so that it will deflect into the rear pin is a way of making it, but it is not as safe as playing the pocket.

Splits, or "railroads" as they are often called, result from thin or light headpin hits or when the strike delivery hits the headpin too full. The wider the split, the more difficult it is to make the spare. Back-row splits are exceptionally difficult; some are almost impossible. The 7-9 split can be made only by treating it as a left-hand strike shot, which, if shot properly, could hit the 9 so thinly that it would slide across to take care of the 7. The 8-10 is callled a right-hand strike shot. They are almost impossible to make. The 4-7-9 or 10, or the 6-7-10 or 6-8-10, on the other hand, are comparatively simpler deflection shots.

It is virtually impossible to make spares from combinations such as the 4-6-7-10, known as the "double pinochle"; the 4-6-7-9-10, amiably called the "Greek Church"; the 4-6-7 and 4-6-10 splits, which have been called many things; and, of course, the most dreaded of them all, the 7-10.

The 5-10 or 5-7 splits, despite the distance between the pins, are both makable deflection shots. Here, again, it is advisable to move with the spare, shooting from the center or near-center. The 5 must be hit thinly on the right side for the 5-7, and equally thinly on the left side for the 5-10. Naturally, great accuracy is needed.

It takes practice and much perspiration and concentration to become the master of the spare. You will continue to miss, as we all do, but the harder you work at it, the less missing you will do.

Chapter 10

Advice to the Ladies

The greatest argument for bowling as the real national pastime is the growing number of women who are attracted annually to the game. It is also with a growing fear for male reputations that we admit they are doing exceptionally well—too well.

There are over 2,000,000 female bowlers and that figure is a modest estimate. The Women's International Bowling Congress, with headquarters now in Columbus, Ohio, was organized November 16, 1916, in St. Louis. The first tournament held in 1917 saw a total of eight teams competing for the prizes. The 1957 WIBC championships, at Dayton, Ohio, began on April 11 and ended on May 27, with a total number of 3,093 teams competing.

Moreover, there are now hundreds of lady bowlers who can participate on equal terms with most men. For example, Eleanore Towles, of Peoria, Ill., won the recent WIBC singles title with a 664 total for three games, an average of 222. Anita Cantaline, of Detroit, Mich., averaged 207 for nine games while winning the All-Events. In 1951, Marion Ladewig, considered the greatest of all modern women bowlers, won the National Match Game Championship with an average of 211, two pins higher than the average of the winner in the men's division of the same tournament.

Bowling fans still talk about the great Mrs. Flora D. McCutcheon, a Pueblo, Colo., housewife who took up bowling to reduce. That was in 1925. In 1927, Jimmy Smith, one of the early all-time greats, visited Pueblo and reluctantly consented to a three-game match with Mrs. McCutcheon. It is a matter of bowling history that Mrs. McCutcheon defeated Mr. Smith, 704 to 686. Mrs. McCutcheon was, perhaps, the best of all the women bowlers.

Possibly it is their incurable curiosity, or the fact that they have more time and greater patience, but women bowlers often progress faster than men. It may be that women become perfectionists in the one game they have discovered can be played by all of them. In many mixed leagues, where women play with and against the men, the ladies dominate the scores.

Lest the lady bowler be lulled into a false confidence and security, it must also be added that women have more faults than do men and some of them are more difficult to correct once they have become habits.

There is no difference in the bowling rules for men and women. They use the same alleys, the same type of ball, and they score exactly the same way. Women do have a physical handicap, however, which is no reflection on

their respective form, but it does make a difference in the early stages of their bowling education. As we have said before, since their arms have a natural tendency to turn out, women are inclined to grip the ball in a manner that leads to a backup delivery. Moreover, most women lack the physical strength of men and must make compensations to overcome this handicap.

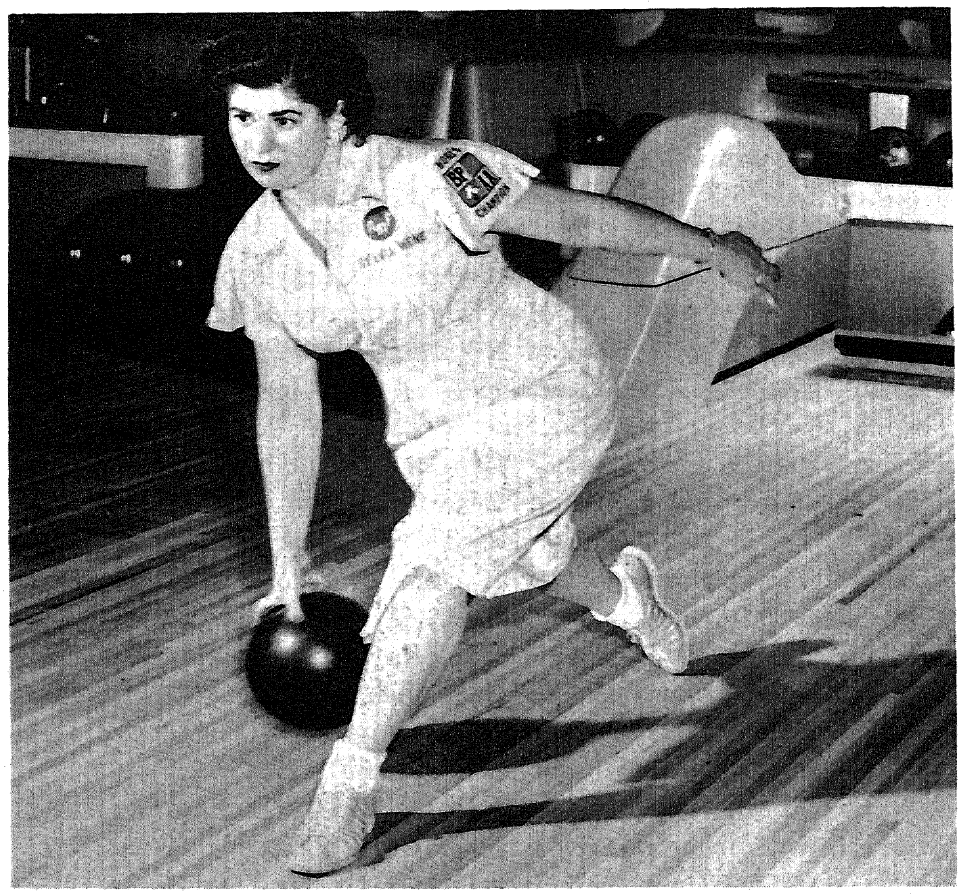


FIGURE 42. *Sylvia Wene, former National Woman's Champion and "Bowler of the Year" in 1955. First woman on the East Coast to bowl a 300-game in league play.*

Our advice to lady bowlers—beginners, average, and even those who have advanced to tournament competition—is simple and based on the more common faults.

1. Don't try to imitate your husband or boy friend. Just because he bowls with a 16-lb. ball, don't think you can. Use a ball between 12 and 14 lbs. in weight. Balls are not sold by the pound. They cost the same whether it weighs 9 or 16. After you have progressed sufficiently and feel that you want to experiment with a heavier ball, that is your choice to make.

2. It is advisable to start with a few lessons from a competent instructor. With proper early training, you can bypass the basic faults that become habit if not caught early.

3. Because you take shorter strides than most men, you don't need as much distance in the approach. What the men do in 14 or 15 ft. or more, you can accomplish by using only 12 ft. of the approach.

4. We recommend the upright stance for women, with the ball held above the waist. That will give you the extra speed you need because the longer pendulum of the upright stance allows the weight of the ball to do the work.

5. We also advise the four or five-step approach, again compensating for probable lack of physical strength in comparison to men. (The three-step approach doesn't allow for a pushaway and therefore is more strenuous than a longer approach.) Let the left hand bear the weight of the ball as you get ready for the approach.

6. Many women have trouble with the pushaway. Instead of pushing away with extended arms, they let the right arm drop with the ball. Thus the pendulum doesn't start swinging, and the right shoulder comes down to cause havoc all the way through the approach and delivery.

7. Women have a tendency to drift. They don't keep their feet in a straight line. All steps should be in a straight line, so that the ball will be swinging in a straight line, too.

8. Because of her physical makeup, a woman should hold the ball more to the right side or more in line with the right shoulder than in the center of the body. It will help keep her in a straight line during the approach and prevent the right shoulder from pulling her and the ball arm to the left.

9. Don't exaggerate the follow-through by bowling with a straight arm and being forced to squeeze the ball. Bend the right elbow at the release point.

10. Keep the wrist firm. Allowing the wrist to break on the back swing is a very common fault, because the thumb gets on top of the ball and is almost thrown instead of rolled. The result is a ball without anything on it.

11. Because your wrist has a tendency to break the wrong way, clockwise or to the right, instead of counter-clockwise, a backup may result. In learning to throw a hook ball, most women have great difficulty with the "V" method of gripping. They are inclined to pull the ball across the body rather than reaching out in a straight line. We advocate the 11 o'clock grip, with the thumb at 11, as on a watch dial, and the other fingers around 5. Try it.

12. Face the pins for spares at all times. Point your left foot in the direction you wish the ball to go.

Of course, there are women who are as strong if not stronger than most men. They are the exceptions. There is no reason why, however, that a woman cannot overcome size, weight, strength, and other physical disadvantages, if that's what we should call them, to become a good bowler. Just remember that speed is not generated by strength and, most certainly, neither is coordination, concentration, harmony, timing, and relaxation. Try to develop those attributes and mold them into your stance, approach, and delivery. It isn't so difficult; women are doing it every day.

Chapter 11

A Lesson for Young Bowlers

The child, and the teen-ager, once prohibited from even entering a bowling establishment, have invaded modern alleys by the thousands and are welcomed with the proverbial open arms as the bowlers not only of the future but also of the present.

Acceptance by communities of bowling as a family sport, and ultimate changes in local laws, have opened a new phase of recreation and entertainment for youngsters. Bowling not only has been a tremendous help in battling juvenile delinquency everywhere but also has mushroomed to such an extent that the American Junior Bowling Congress, unrelated to the ABC, with headquarters in Chicago, was formed and it numbers more than 125,000 members nationally. The adoption of bowling as a competitive sport by schools and colleges has further enhanced the inspirational growth of the biddy bowling brigade.

The grown-ups, furthermore, began to pay heed when 15-year old boys—LaMarr Miller, of White Pigeon, Mich., in 1954; Teddie Hoffman, Jr., of Philadelphia, in 1955; and Gene Kuchinsik, of Toledo, Ohio, in 1956—bowled 300 games.

Modern methods of bowling, vastly improved instruction, and a natural willingness to learn and improve make the youngsters a definite threat, by invitation, to the top-notchers among the adults. More and more youths in their early twenties qualify each year for the All-Star tournament. Carmen Salvino, of Chicago, for instance, has competed in this event for six years—since he was 17. He has bowled 27 perfect games, and was twice an All-Star semi-finalist.

Maybe you can't get to the top as quickly as Carmen but you have the advantage of learning the game at a flexible age when corrections can be made easily.

What is the best method of teaching youngsters? What is the best advice to give them?

1. PROPER WEIGHT BALL. Use a light ball. Don't be a hero by trying to wield a heavy one. Most alleys now have balls as low in weight as 9 lbs. Try them and move up gradually as you grow stronger and more sure of yourself.

2. INSTRUCTION. If possible, use an instructor for the first two or three games. Don't be a know-it-all. The mistakes you make at the outset often become habits and may even cause injuries.

3. PROPER SPAN. Use a short span. This will prevent any pull on your fingers and make it easier for you to control and manipulate the ball.

4. STANCE. We recommend a bend or stooping stance or the crouch as against the upright stance with the ball held chest high. The ball should be held below the waist or at most waist high. Youngsters should avoid using the upright stance because in the longer arc required for the swing the weight of the ball tends to pull the shoulder down and cause a sideways delivery at the foul line.

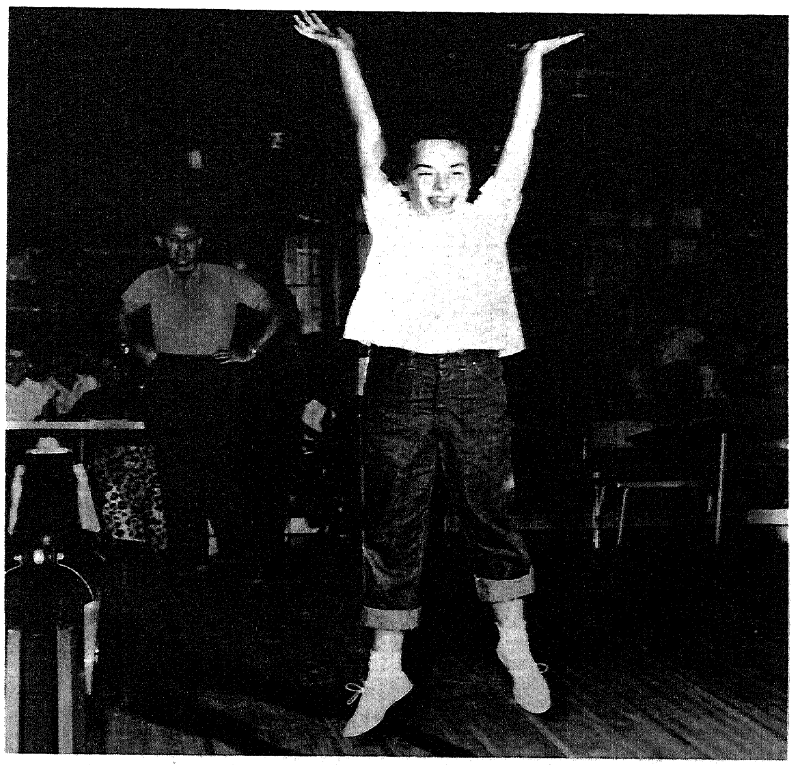


FIGURE 43. *This youngster shows the typical enthusiasm for the game of bowling that has children and teen-agers flocking to the alleys in growing numbers. This type of spirit led to the formation of the American Junior Bowling Congress.*

5. FOOTWORK. Steps should be short rather than long and the starting position should always be the same. Forget the number of steps. Use as many as you need to get you to the foul line as smoothly as possible.

6. SPEED. Don't throw harder than is natural for you. Don't look for the big score right away. Trying to throw hard will unbalance your game and you will lose coordination and timing. Develop proper timing and speed at a sacrifice of score at the beginning. Practice your approach for timing and coordination, either with target pins or no pins at all.

7. PUSHAWAY. Don't use too much of a pushaway because you will find it a strain. Use a minimum of backswing to keep the arm in line.

8. GRIP. Use the conventional three-finger grip with thumb and fingers inserted full depth. Youngsters with exceptionally small hands should use the open grip to get better balance.

9. DELIVERY. Throw a straight ball and watch the pins. You are not ready for hooks and curves or for spot bowling.

10. RELEASE. Roll or push the ball forward rather than loft it.

11. SPARES. Move with the spares. If a spare is on the left of the alley, move to the left. Bowl straight down at the ball—don't cross. You are not ready for that.

12. RELAX.

Chapter 12

Advice for the Advanced Bowler

The more proficient you become in bowling, the more worried you get about your score and the more apt to seek advice. If you are a better-than-average bowler and have reached a "sticking point," you probably are as frustrated as a major league ball player in a slump. The moment your average falls or you roll one or two bad games, you begin making changes and listening to everybody who will criticize. You tense up instead of relaxing, and what may have been a simple hitch or just the fact that you were "off" becomes a major catastrophe and results in complete loss of form and score.

Through the years, we have developed both a bowling philosophy and a series of seven check points to go along with it. If your game is off, there must be a logical reason.

1. CHECK YOUR FOOTWORK. Make sure you have not speeded up your approach or slowed it down. You should start slowly and work up gradually to a natural speed. On a four-step approach, the first two steps should be one-half or three-fourths the length of the last two. The slightest change of speed in your natural delivery can throw your timing and coordination off.

2. WORK ON YOUR TIMING. When something has gone wrong, it could well be your timing. Practice the proper rhythm of your arm, swing, and footwork until you bring the left foot and the right arm to the foul line at the same time (if you're right-handed) for each delivery. Above all, practice. It will bring back your confidence and your game.

3. PUT THE PROPER TURN ON THE BALL. Perhaps you are not releasing the ball properly. Don't put any twist on your ball until it reaches the foul line. Almost all the turnover should be applied in front of you, past the line. Make sure you haven't developed a snap or jerk when releasing the ball.

4. MAINTAIN YOUR FORM ON THE FOLLOW-THROUGH. After release, your left foot should be just behind the line, pointing straight for the head pin, and the right foot in a natural position behind the left for balance. The right arm should follow straight through after delivery, until it reaches eye level. We cannot stress enough the importance of the follow-through in timing.

5. LEARN TO "PLAY" ALLEYS PROPERLY. One of the biggest hazards to better bowlers is their inability to play alleys properly. Once they get off their own alleys, they get lost.

When on strange alleys or even familiar alleys recently lacquered or shellacked, see how your natural ball behaves. If you are a hook or curve bowler

and your ball hits the head pin too full, increase your speed or move nearer the center of the runway. If you are getting thin hits on the head pin, slow down your ball, or move to the outside. You can also achieve the same result by changing your line or spot.

6. CLOBBER THE SPARES. It may be that you're missing too many spares. Don't be satisfied with just knocking a spare down, but always try to smack it dead center. Roll at most spares at cross angles. For one-pin spares, be sure your right hand, after release and follow-through, is pointed straight at the pin.

7. KEEP COOL. There's no place for temperament on the bowling alley. We all have bad games and bad nights. Moaning and groaning over mistakes will only throw you more off stride for the next roll.

These are my rules for checking or correcting a game, and I feel that they cover most of the ailments which plague the average and advanced bowler. However, there are other common faults that develop even in good bowlers.

It is well to point out that 80 per cent of good bowling comes from a smooth approach and proper timing. Coordination of arms and feet in the approach, a graceful delivery without abrupt stops or jerks; consistency; uniformity—all these factors are involved in a bowling delivery. It is essential that your arm and feet work together, for they must get to the delivery point at the same time. That is why, for the advanced bowler, we prescribe practice and more practice.

FIGURE 44. *Proper foot position for shooting at right corner spares. The dots on the approach are guide marks for the feet. The toes point in the direction of the target. This is reversed for left corner spares.*

It is estimated that the average bowler is the one who scores around 155. The more advanced bowler would be getting 175 and up. For one to hit that kind of a score consistently, he must work at it.

Practice is, perhaps, the key to the difference between the average and the advanced bowler. You can't just wish to bowl well. You must devote time and effort to the game. To achieve an average of 180 or better, you should bowl in at least two leagues and get in a dozen practice games every week. I learned long ago that the word "champion" on your shirt doesn't knock the pins down. I've bowled as many as seventy-five games in one week under changing conditions—alleys that were slick, others that were medium, and some that needed polish. I can't repeat enough—practice, practice, practice.

You will be amazed at how many good bowlers are thrown off their timing by the beginner's fault of throwing too fast a ball or unconsciously exaggerating a backswing. There are good bowlers, too, who sometimes lapse into throwing the ball instead of rolling it. Others tend to push up instead of away. Some, in an effort to get more "stuff" on the ball than is natural for their type of delivery and release, develop wrist break. There are menaces always facing the bowler, even the top ones.

Confidence is a most important factor. A confident approach means no hesitation to spoil the smoothness. There are times when you lose confidence, particularly when bowling on strange alleys. For that, I have discovered a simple remedy. When your game slips for one reason or another and it seems to occur most frequently on strange alleys, go back to your favorite alley or pair of alleys—everybody who bowls more or less regularly has what we call "his own alley." Practice on familiar grounds for a while and your confidence will come back.

Spot bowling versus pin or line. Perhaps no two experts will ever agree on the relative merits of these bowling "systems." I switched from pin bowling to spot bowling even though I was averaging 200 as a pin bowler. My average dropped so sharply that in desperation I changed back to pin bowling. Shortly after that, in the summer off-season, I did nothing but practice spot bowling until I saw spots before my eyes even as I slept. Now, I never look at the pins at all.

There are great bowlers in all three categories but a good deal depends on the type of delivery. Our advice to the spot bowler who can't seem to improve his score is to check the foul-line approach. The good spot bowler must finish at the foul line within ¼ in. in the same position every time, or he will be thrown off his game.

If you find yourself unable to gain that kind of consistency in your foul-line approach, don't spot bowl. Switch to pin or line bowling. Both pin and line bowling allow for more margin of error in the approach, although too much variance will completely kill your coordination and timing.

The flexible spot may be a method to help you adapt your game to the varying alley conditions that plague so many good bowlers and keep their

averages down. Many outstanding bowlers insist that the spot should never be changed, merely the angle. That's fine if it can be done, but there is always the danger that in moving to the left on a hooking alley the ball is pulled across the body.

With a flexible spot, or line, you can move the spot further down the alley, or to the left or right, to meet running or holding alleys. You adjust your approach position not necessarily by moving but by pointing your feet and shoulders at the newly selected target.

Once you know how your hook or curve takes by throwing your natural ball, you can make the adjustment accordingly for spares and splits. The key pins in knocking down almost any standing combination are the 5-, 7-, 8-, 9-, and 10-pins. You shoot from the right at the 5, 8, 7, and combinations involving them, and from the left at the 10 or 9 and like combinations, unless pins on both sides are involved .

Adjusting speed of the ball for certain alley conditions can also be a solution. If, after throwing several balls, you discover that changing the spot or the angle doesn't answer your problem on a hooking alley, speed up the ball slightly to keep it from breaking too sharply on the back end. On an extremely slick or fast surface of the running alley where the ball won't grip as much, slow the ball down. That will give it more roll and a better chance of gripping when it gets two-thirds of the way down the alley.

Roll or spin of the ball is a complicated matter and difficult to explain even to the advanced bowler. Why does one ball roll more than another or one spin more than another? The answers are found in the type of ball you throw and the way you throw it. There are those who throw a full roller or semi-roller, or a spinner or semi-spinner—all of which merely describe the way the ball turns on its axis. There are few spinners. Most good bowlers throw a roller or semi-roller or a semi-spinner.

You can determine your own degree of consistency by looking at the track marks of your ball. The proper track, showing at least that you are delivering the ball more or less the same way every time, should be just off the thumb hole. If your ball rolls over the thumb hole, you are turning your hand too soon before release. Such a ball will not be very effective. The narrower the track is the smoother your delivery will be.

The search for improvement is the intriguing as well as the aggravating part of the science of bowling. From conventional two-and three-finger grips, the game has progressed to a point where there are about 500 aids for the bowler, some involving different methods of drilling the finger holes; others concerning artificial "gimmicks" inserted into the thumb or finger holes, or both; and some used directly on the fingers or around the wrist. We make no claims for any of them. If you should try some of the better-known methods and find one to your liking, use it.

It is frustrating to keep bowling 160 or 180 all the time. If you're that static after a number of years, go to a pro and take stock. Some minor fault may be blocking your progress.

The semi-finger-tip grip is closely related to the conventional grips but is and should be used only by experts. Whereas the conventional grips require a span big enough to get the fingers into the ball up to the second joint, the span of the semi-finger-tip grip is narrower and the ball is held with the thumb inserted full length. The other finger or fingers are inserted only slightly beyond the first joint. This grip allows greater play for the fingers in giving lift or turn to the ball but is extremely difficult to control for all except skilled bowlers.

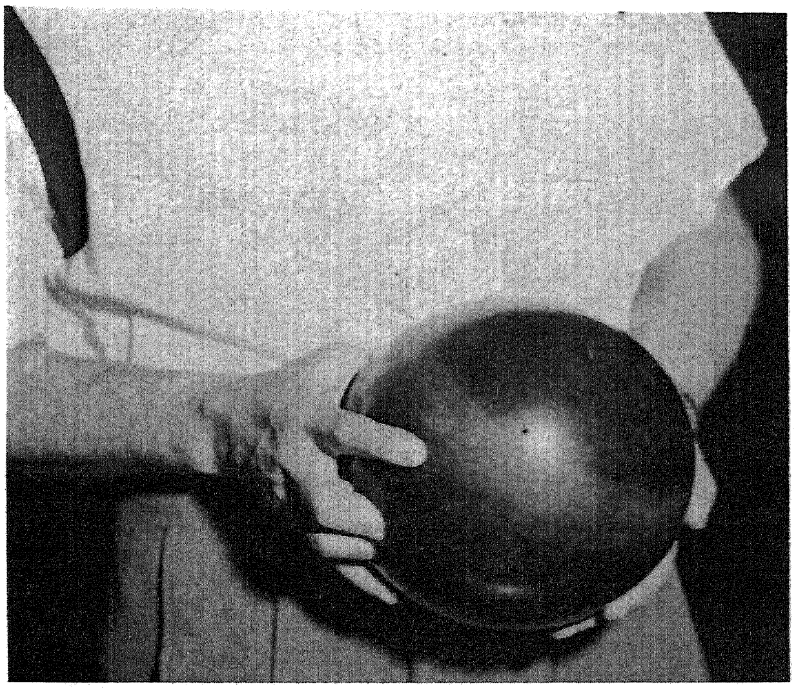


FIGURE 45. *The semi-finger-tip grip, with narrower span, has the fingers in up to the first joint. This is also only for skilled bowlers.*

The full finger-tip grip requires a greater span because the finger tips are just barely inserted into the finger holes. That is even more hazardous than the grip described above, since there isn't too much room for play by the fingers. Bowlers like Lee Jouglard use a loose finger-tip grip, with a slightly shorter span, to give the fingers a bit more room for activity. In the full finger-tip grip, the thumb is usually inserted only up to the first joint.

Experimenting with grips, ridges, curves, and pitches with the finger holes has resulted in more methods of hole-drilling than we care to discuss. Some of the more popular ones are known by the names of their inventors: Ned Day, Chuck Collier, and Sully Bates.

The Ned Day grip—Ned throws a full roller, with the thumb and finger holes pitched under the palm in the same positions as in the conventional grip.

The Chuck Collier grip is similar to the two-hole conventional grip with an extra finger hole added. In the two-hole conventional grip, the thumb and middle finger are drilled on the centerline.

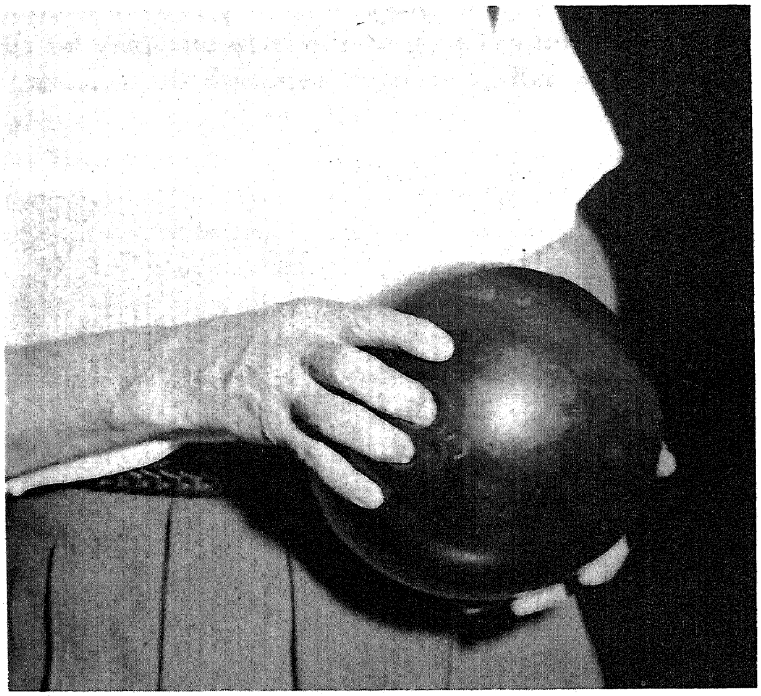


FIGURE 46. *The full finger-tip grip. The span of this grip is very wide. Note that the finger tips are just barely in the finger holes. This is strictly for the experts.*

The Sully Bates grip is like the Collier grip but with the thumb and finger holes under the palm.

Artificial aids for the ambitious or ailing bowler are many and varied. Anything from picking up one's game 20 pins to what amounts to bowling by radar is advertised. Some items have earned a degree of popularity, however, and are worthy of mention and capsule description.

The Roto-Grip is a cylindrical adapter installed in the ball at the location of the thumb hole. The thumb hole in the adapter is drilled off-center so that it changes span when revolved. A rubber bolt keeps the adapter firm. The Roto-Grip pledges perfect fit, adjustment to hand changes, and adjustment to alley conditions.

The Shur-Hook, created by Ace Mitchel, is a device made of cork, or cork compound. It is normally about 1½ in. in length and ¾ in. in width. It is made for thumb and fingers. The one for the thumb hole is flat, with no ridges or anything else on it. The ones for the finger holes have a series of rounded or raised portions. These in turn are gripped on the first joint, which is supposed to assure better gripping. It is designed to eliminate slipping and

sliding and, at the same time, provide a firmer grip for putting more stuff on the ball.

The Steve Nagy Grip, made of a rubber compound, is somewhat similar to the Shur-Hook, but is not used for the thumb hole.

Bowler's Prime Grip, of rubber, is also similar to the Shur-Hook. (For all three devices, remember that there should be sufficient room in the finger and thumb holes to compensate for the space taken up by the grip.)

Easy Hold is a rubber thumb insertion created by Manhattan Rubber. It is approximately 1¼ in. long, is made of soft rubber material, and is expected to give a bowler easier gripping on the thumb hole. Persons with sweaty or oily hands have found it a useful item.

Easy Lift, another Manhattan Rubber invention, has to be forged into the ball after the holes have been drilled in. This concerns the drilling of two depressions in the finger holes at the area in which the first joint of the fingers press upon the inside wall of the ball. These depressions are from ½ to ¼ in. in depth. The manufacturers contend that with this aid there is a sure grip and better hold; there is the insertion of the fingers at the same depth each time; and also that there is a lighter feeling to the ball, which helps the bowler throw a stronger ball.

FIGURE 47. *The fabulous Fabers, one of the outstanding five-man teams in the country. The players all hail from Bergen County, New Jersey. From left to right: Chuck Pezzano, Lindy Faragalli, Lou Campi, Eddie Gass, and Slim Okular. Faragalli and Campi, hottest bowler of the year, won the National Doubles title in 1957.*

The manufacturers of **Claro-Grip creams**—one of many cream-like or liquid aids to the bowler—claims they never permit the bowler's fingers to slip.

The Dick Weber Thumb, a patented item by the well-known St. Louis bowler,

is a leather glove which covers the thumb only and is attached to the bowler's wrist by a leather thong or strap. It covers practically the entire thumb. The advantages here supposedly are the elimination of callouses and sore thumbs, irritations by the thumb rotating in the ball or rubbing as it comes out of the ball, and slipping caused by sweaty thumbs. It also claims a better hold. Since Weber uses it and is considered one of the outstanding bowlers in the nation, he may have a fairly good argument.

The Dick Hoover Power Wrist Positioner was designed by the highly-skilled Akron, O., bowler, to prevent wrist break. It is a device made of leather with an aluminum back and a sponge-rubber cushion between the leather and aluminum. It is strapped onto the wrist, with the back of it coming halfway down on the top of the bowling hand. The purpose, of course, is to force the wrist to remain firm, thereby establishing better control, better direction, and better delivery.

These are but a few of the products of the growing bowling industry. If you'd like to try one or more after reading the advertising arguments, that is solely your option. They may improve your game and they may not. However, they are definitely not for the beginner.

Chapter 13

How the Great Bowlers Do It

Imitation, the sincerest form of flattery, is the biggest danger in bowling. People, watching the champions do it, immediately try to copy their styles, particularly in this television era that has placed the big names of bowling on millions of home screens.

All you can really learn from watching, either in person, or on television, is the significance and effect of a smooth, graceful approach and delivery. You can also pick up a few items that are not exactly according to bowling Hoyle. Every star has his own individual style and mannerisms. Some include touches of showmanship that fit their particular personalities but will do yours absolutely no good at all. It is fine to seek occasional advice from the expert, but you should never copy him.

Bowling champions are human, just as you are. They are subject to the same faults and probably more than you are to the emotional elements of pressure and tension. They are always bowling under tremendous pressure because they have a proven standard to uphold, and, to many, bowling is their means of making a living.

The only difference between the professional bowler and you is experience, years of work and practice, and, of course, the score. If you want to work as hard as they do and go through what often amounts to the heartbreak of experimenting with approaches and deliveries and the pains of callouses and pulled or torn muscles, you, too, can get to be a champion—or at least a top-average bowler. The sacrifice has to be made. Not many bowlers, like Lou "Wrong-Foot" Campi, begin careers with averages of 180. Lou, the Dumont mason, is an exception.

How do the great bowlers do it? What are the bowling habits of the leaders? How do they stand and what type of ball do they throw?

LEE JOUGLARD, Detroit, Mich., is a fine bowler and great teacher. He uses the three-step approach, starts from the left with a chest-high, erect stance. He uses a semi-finger-tip grip or what might be called a "loose" finger-tip grip. Lee is a pin bowler and throws a hook ball with medium speed in what could be called a full roller. Contrary to most three-step bowlers who employ no pushaway, Lee pushes out and down, all on the first step. His backswing is medium.

LOU CAMPI, Dumont, N. J., is one of the most amazing competitors in bowling. He uses a four-step approach and starts on the left foot—a habit developed playing Italian bocci. The short, stocky Campi finishes on the right foot, reversing all bowling teaching. Lou holds the ball waist high in an almost erect stance and uses a semi-pushaway. He is a pin bowler who delivers

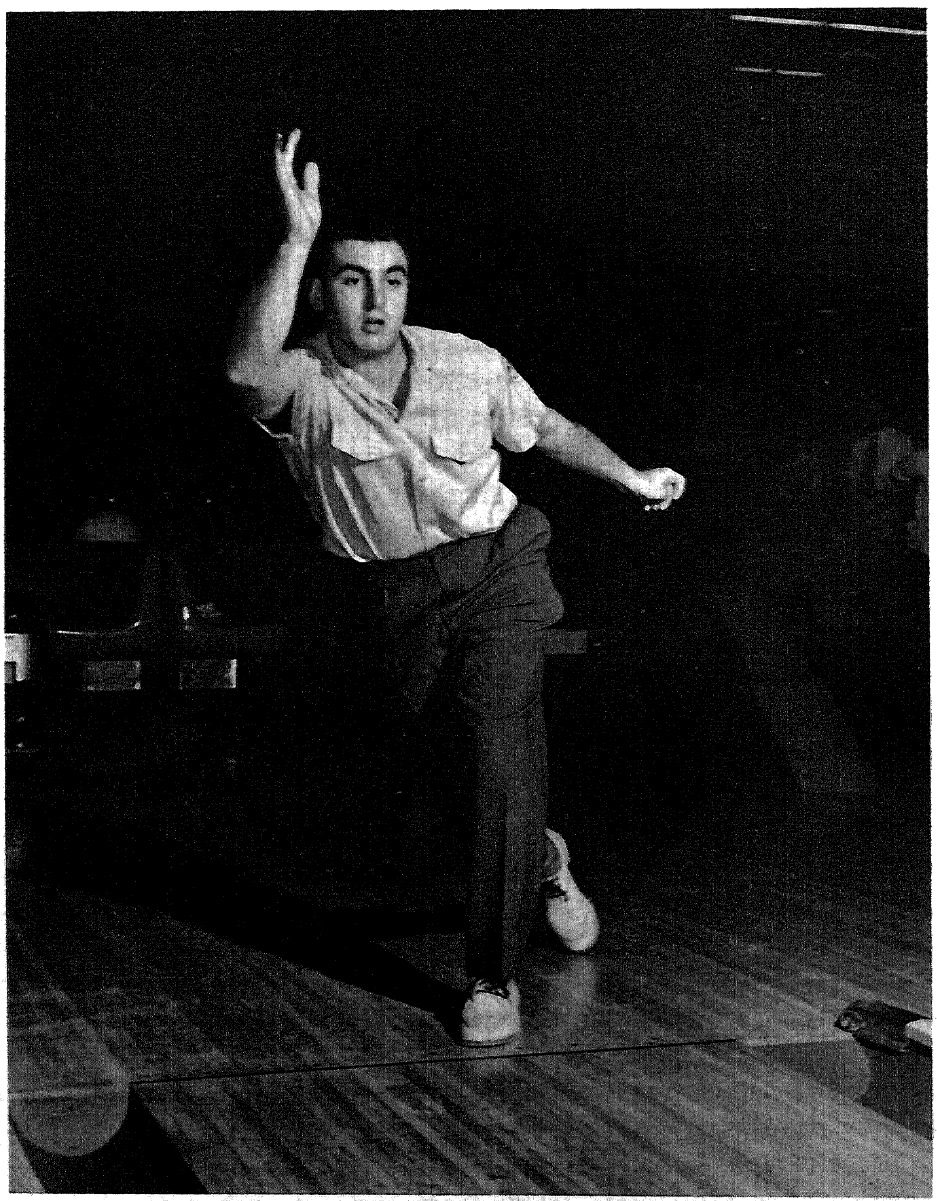


FIGURE 48. *Carmen Salvino, of Chicago, is another young newcomer to the galaxy of stars. Here is a further example of perfect rhythm and harmony in delivery.*

an excellent hook at medium speed off a medium-high backswing. His ball is a semi-spinner. He uses a specially drilled ball with four finger holes.

DON CARTER, St. Louis, Mo., twice national match game champion, uses a four-step approach from an extreme crouch with a short pushaway. He crooks his elbow in almost to his side and shovels the ball. His backswing is short, his speed is medium, and his short hook comes off a full finger-tip grip in a three-finger ball. He keeps his eyes glued on the target.

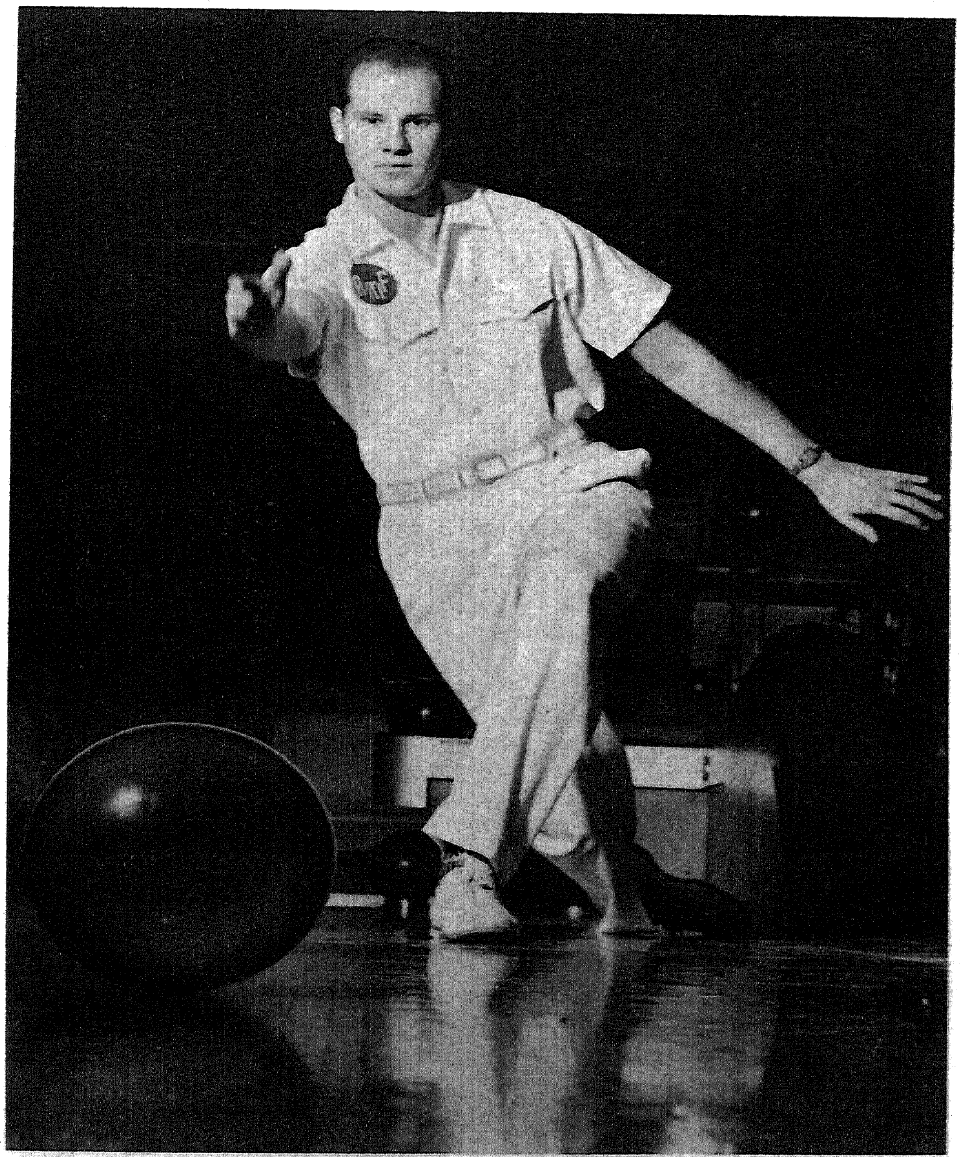


FIGURE 49. *Billy Welu, from Houston, Texas, is, at 6 ft., 3 in., one of the tallest top bowlers. He won his first bowling title at the age of 23. Billy just sent his sharp-breaking hook on its way and is completing the follow-through.*

CARMEN SALVINO, Chicago, one of the youngest of modern stars, uses a four to four and one-half step approach. He stands very erect, ball held chest

high, and uses a full pushaway and a very high backswing. He stops with short slide at the foul line. Using a three-finger ball, with a conventional span, he throws it medium fast. Carmine is a hook bowler.

NED DAY, West Allis, Wis., member of the Hall of Fame, is a curve ball bowler. Day starts from an erect stance with a waist-high ball in a very slow four and one-half step approach. He is now a two-finger ball bowler, al-

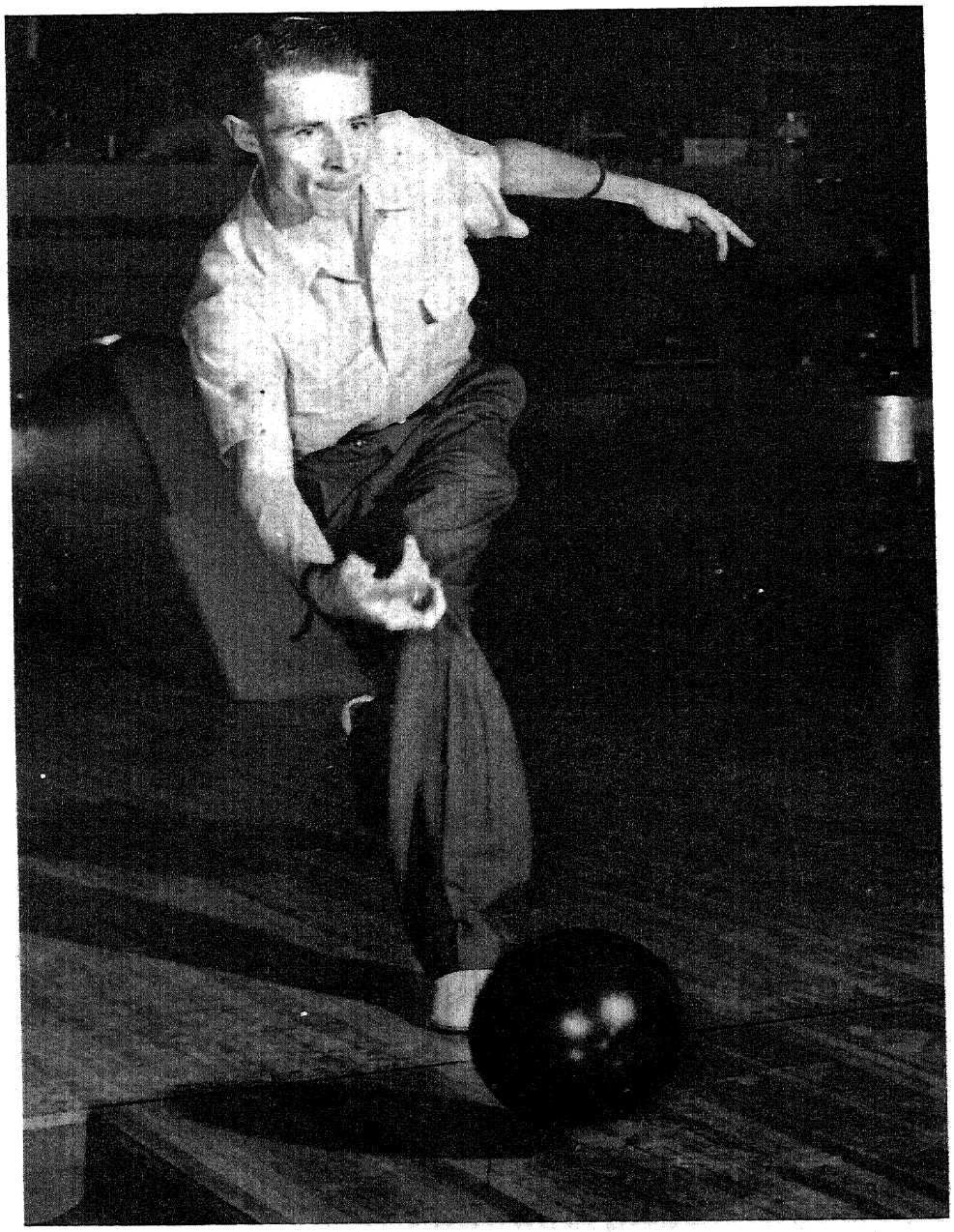


FIGURE 50. *Dick Weber, of St. Louis, one of the nation's great bowlers, has just released and is going into the follow-through. The strap around his wrist holds the "Dick Weber Thumb" in place.*

though he tried a three-finger grip for quite a while. He uses a full pushaway with a medium slow ball delivery and completes follow-through with his right arm completely across the body.

BILLY WELU, Houston, Tex., is, at 6 ft., 3 in. one of the tallest big league bowlers. Injury to the right hand forced him to develop a bowling grip of his own. He uses a basic two-fingered ball, but, in addition, the ring finger is drilled out to finger-tip depth to allow additional grip and lift. Being a spot bowler, he throws a fairly fast ball with a sharp-breaking hook. He uses a four-step approach from an erect position, with the ball held waist high. He has a good pushaway and a medium high backswing.

TONY SPARANDO, Rego Park, L. I., uses the three-step approach from an erect stance with a waist-level ball carry. He was a two-fingered ball user, but now uses the three-finger ball with a semi-finger-tip grip. Tony, who throws with medium speed, is a pin bowler with a fine hook.

STAN GIFFORD, Chicago, is another of the potentially great young men to come up in recent years. His unusual approach has seven or eight steps, most of them short and fast, but the last three are normal in length and speed. Using a three-hole ball with a full finger-tip grip he starts from an erect stance with the ball held chest high. His pushaway is full; his speed, medium fast. Stan is a hook bowler.

All these men have been, are, or can be champions. They vary in their styles and deliveries, but they have one thing in common: the willingness to sacrifice to achieve their respective aims. Besides a natural ability to start with, they have the will to work and the desire to win—plus plenty of stamina and courage.

Chapter 14

Bowling Etiquette

The rapid entry of youth into the sport of bowling and the tremendous growth of league competition, as well as the amazing rush of women to the modernized alleys, make it all the more important that the unwritten rules of etiquette be firmly understood.

Sportmanship is the finest lesson anyone can learn from participating in sports, and the majority of the points in the bowling code of ethics and etiquette come under this heading.

It is understandable that in the heat of competition, tempers will flare, tongues are loosened in anger, and perhaps, on occasion, a fist may fly. In bowling, any active display of such violence is not tolerated. If it occurred in championship competition, the offender would be suspended and disqualified. Even if it happened in casual bowling, he would probably be shunned from future invitations to the particular alley. The quickest way to lose friends is to abuse them.

The birth of bowling as the family sport makes it imperative that you set the example for your children, or somebody else's, by behaving at all times like a gentleman or a lady. You can do that easily by following the simple rules of the bowling sportsman.

1. **Control your temper.** This is probably the most vital of all the behavior regulations. Temperament not only is imperative to good sportsmanship, but it can be a determining factor in your score and game. You can't bowl properly when you're loudly abusing the ball or the pins or the alley in general. If you must let off "steam," do it silently.

2. **Don't heckle or talk loudly while** an opponent or a bowler on an adjoining alley is set to roll. As in golf and similar sports, distractions interrupt concentration, and concentration is a vital part of bowling.

3. **Don't brag or moan.** If your score is good, let the others tell you. If the score is bad, it's best kept a secret.

4. **"Body-English" should be confined to the limits** of your particular alley. Don't carry it to an adjoining alley, where you'll interfere with another bowler.

5. **Observe the foul line** even when bowling for fun, because it will save a lot of arguments. Fouls are costly in competition not only to yourself but also to a team, if you are playing with one.

6. **Walk a straight line** to and from your alley, in delivering a ball and

returning to the bench. Never walk across an adjoining alley in front of another bowler getting set to bowl.

7. **The right of way** belongs to the bowler on the right. Unless you are signalled to shoot first, wait until he completes his delivery.

8. **Use your own ball.** Don't use somebody else's ball unless you receive permission.

9. **Don't be "gabby"** at the wrong time. Do not talk to a player as he is about to shoot. Your conversation, carried on in a reasonably low voice, should be confined to those sitting on the bench.

10. **Don't give advice** unless it is asked for.

11. **Don't be a wanderer.** Stay close to the alley while a game is in progress. Don't walk around, where you get "lost" when it's your turn to shoot—above all, don't walk on the approach while someone else is bowling.

12. **Don't mark up the approach.** Check your shoes before you bowl and see if they are clear of any substance that could mar the approach.

13. **Don't be a comedian.** Fooling around while the bowling is going on can disrupt an entire game for everybody.

14. **Be a good sport.**

15. **Be a good loser.**

Chapter 15

A Brief History

Rip Van Winkle, famed for his lengthy nap, still receives an honorable mention for unconsciously introducing America to the sport of bowling; but just as the game itself has changed through the years, so have the varied versions of its origin.

Old Rip may keep this honor, but he'll have to get in line. It is conceivable that, as prehistoric records on cave walls seem to suggest, even our ancestors participated in a game in which rocks were rolled around at a variety of objects. Some imaginative historians even ponder the possibility that the lads in early Biblical times used to toss giant pebbles at a lineup of pointed stones.

Until recently, it was the accepted belief that the game originated in Italy 1,000 to 1,500 years ago as a sport known as "bowles" or "bowling on the green." That particular theory, however, has since been discarded by the discovery of a number of volumes on the subject which were written by respected historians.

It can now be safely stated—and there are few around who will dispute it—that bowling originated some 7,000 years ago in ancient Egypt as a form of "skittles." In the Christian era much research has uncovered the popularity of the game of "bowles" in England; of carreau, a primitive form of bowling in France; and "curling," sometimes called "bowling on ice," in Scotland. There is a record, also, of the first indoor alley having been built in London in 1455.

Probably the most revealing and most interesting volume on the history of bowling, called simply *Bowling,* was written by a German, William Pehle, in the nineteenth century. It seems that Herr Pehle made a lifelong study of bowling, as a secretary of the German Bowling Society, and the results of his findings were published in a book limited almost strictly to local consumption.

Although no actual date was set by Pehle, he described the practice by all early-day Germans of carrying a club, somewhat like our modern Indian club. The Germans called the club a "kegel," or "kegle," and, like the shillelagh of Ireland, it served multiple purposes—including, no doubt, a bit of mayhem. The users of the kegel were called "keglers," which is a present-day term describing a bowler.

The kegel was used for a variety of friendly contests, for self-defense, as a hammer. Also, on long runways (similar to today's bowling alleys) which

were adjacent to the old cloistered churches, the kegel was set up as a target to roll at.

It was a test of the honorable life, as well as of skill and accuracy, for the German to place his kegel topside up at the end of the runway and to attempt to hit it with pebbles as round as could be found. A hit meant a man was leading a pure life. A miss indicated that he had some of the heathen in him, which he could get rid of by hitting the kegel with the pebble.

Around the fifth century, the idea developed of lining up a row of kegels and rolling pebbles at them. The one who knocked down the most kegels was declared the winner.

As time passed, the game was copied and improved upon in other sections, and eventually specially shaped pins replaced the kegel and wooden balls superseded the pebbles. Rules were gradually established, but differed from place to place. The number of pins used ranged from three to as many as seventeen, and nine pins were finally settled upon as the standard for German bowling or kegling. It was played both indoors and outdoors, with the player compelled to roll indoors and given a choice of rolling or throwing at the pins outdoors.

Bowling was highly popular by the time of the Middle Ages, the game, with variations, having been picked up by other countries. The Lowlands of Europe followed Germany in adopting the sport, and it spread into Austria, too, through the fifteenth, sixteenth, and seventeenth centuries. Although there is evidence that some sort of bowling was done in England and that Henry VIII enjoyed a game, the sport grew into ill repute and an act was passed forbidding anyone to operate a bowling establishment for personal gain.

So Old Rip apparently wasn't dreaming when he thought he saw the diminutive Dutch burghers of Hendrik Hudson's time playing at ninepins in a Catskill Mountain hollow. Bowling at pins was undoubtedly introduced in the United States by the Dutch and probably before Rip started his famous snooze.

Bowling gained tremendous popularity in New York and New England in the late 1830's. But gamblers took over the sport in Hartford and New Haven, prompting the Connecticut legislature to pass a law prohibiting the game of 9-pin bowling.

There is no record of how the present ten-pin game began. Legend has it that some ingenious promoter added the tenth pin to evade the law, and from 1860 bowling was regularly played with ten pins, which were set up in the familiar triangular form. There was no real organization to the sport, however, until the American Bowling Congress was formed in 1895.

When the ABC took over, the long struggle began: to lift bowling from the shocking depths to which it had sunk. Alleys had actually become hangouts for hoodlums, cheap gamblers, and other disreputable individuals. Gentlemen and their ladies preferred to give up the sport rather than frequent such establishments.

It took tremendous work, patience, clear thinking, and enterprise to bring the game to the heights of today. There are more than 22,000,000 bowlers in the nation, and the figure grows astoundingly every day. These statistics pertain to ten-pins only and do not include the bowlers who prefer bowling at duck-pins or candlepins, both of which are popular in certain sections of the country. Baseball may be the national pastime outdoors, but bowling is the greatest *participant* sport—indoors or outdoors.

Chapter 16

A Few Records and Highlights

Records, they continue to say, are made to be broken. Some last longer than others, but eventually other great performers come along and establish new marks. No one ever believed that a pitcher would hurl a "no hit, no run" game in a baseball World Series without permitting a single man to reach first base, but Don Larsen did it in the 1956 World Series for the New York Yankees against the Brooklyn Dodgers. In bowling, the "dream game" is what every player shoots at, and it is through this striving for perfection that records are born.

It is entirely possible that you may never break a record or even come close to one. Yet, average bowlers have rolled 300 games and duffers have made holes-in-one in golf. Besides, it is highly interesting to know the outstanding achievements in bowling and what you have to shoot at, if you get that ambitious.

Since the ABC keeps the records and passes on them, the following listings of the highs all have the approval of the ABC, and were bowled under ABC competitive rules and regulations.

AMERICAN BOWLING CONGRESS CHAMPIONSHIP RECORDS

(The first ABC tournament was held in Chicago in 1901. With the exception of the years 1943-1945—that is, because of World War II—it has been an annual competition.)

HIGH SINGLES (Three-Game Total)

1. Lee Jouglard, Detroit (1951): 775.
2. Larry Shotwell, Covington, Ky. (1930): 774.
3. Al Sharkey, Chicago (1952): 758.

HIGH DOUBLES

1. John Klares-Steve Nagy, Cleveland (1952): 1,453.
2. Gil Zunker-Frank Benkovic, Milwaukee (1933): 1,415
3. Phil Icuss-Murray Fowler, Steubenville, O. (1939): 1,405.

ALL-EVENTS (Nine Games—Single, Doubles, Team)

1. Jim Spalding, Louisville, Ky. (1957): 2,088.
2. Max Stein, Belleville, Ill. (1937): 2,070.
3. Gil Zunker, Milwaukee (1933): 2,060.

HIGH TEAM TOTALS

1. Birk Bros., Chicago (1938): 3,234.
2. Tri Par Radio, Chicago (1954): 3,226.
3. Tea Shops, Milwaukee (1927): 3,199.

ALL-STAR INDIVIDUAL MATCH GAME CHAMPIONSHIPS (100 Games)

Recent Winners

1949-50: Junie McMahon, Fair Lawn, N. J.
1950-51: Dick Hoover, Akron.
1951-52: Junie McMahon, Fair Lawn, N. J.
1952-53: Don Carter, Detroit.
1953-54: Don Carter, Detroit.
1955-56: Steve Nagy, Cleveland.
1956-57: Don Carter, Detroit.

MASTERS' TOURNAMENT WINNERS (Eight Four-Game Matches)

1951: Lee Jouglard, Detroit
1952: Willard Taylor, South Charleston, W. Va.
1953: Rudy Habetler, Chicago.
1954: Eugene Elkins, San Carlos, Calif.
1955: Buzz Fazio, Detroit.
1956: Dick Hoover, Akron.
1957: Dick Hoover, Akron.

OTHER RECORDS AND HIGHLIGHTS

HIGHEST INDIVIDUAL SINGLES (Three Games)

Albert Brandt, Lockport, N. Y. (1939): 886.

HIGHEST ALL-EVENTS (Nine Games)

Frank Benkovic, Milwaukee (1932): 2,259.

HIGHEST DOUBLES (Three Games Each)

Dick Weber, 814; Ray Bluth, 727 (1955): 1,541.

HIGHEST TEAM (Five Men, Three Games Each)
Hermann Undertakers, St. Louis (1937): 3,797.

Clarence (Lefty) Long, of Buffalo, N. Y., is the only left-hander to win the ABC all-events title (bowled in 1925). Long, 64, rolled a 300 game in the Buffalo Championship on May 7, 1957.

Ned Day, of West Allis, Wis., has rolled consecutive perfect games three times in his brilliant career.

Robert Watson, Los Angeles, rolled a 300 game in ABC competition in 1947 at the age of 70—the oldest ABC medal winner.

Harold Allen, Detroit, shared the ABC doubles title in 1915 at the age of 18—youngest ever to win an ABC championship.

WOMEN'S INTERNATIONAL BOWLING CONGRESS CHAMPIONSHIPS

High Singles

1. Marie Clemensen, Chicago (1934): 712.
2. Lucille Noe, Columbus, O. (1956): 708.

High Doubles

1. Marion Ladewig-Wyllis Ryskamp, Grand Rapids (1955): 1,264.
2. Betty Maw-Mary Quinn, Buffalo, N. Y. (1956): 1,242.

All-Events

1. Marie Wambier, Chicago (1935): 1,911.
2. Marion Ladewig, Grand Rapids (1955): 1,890.

High Team

Falstaff's, Chicago (1955): 2,991.

All-Time High Individual, League, and Tournament Competition

Angela Mica, St. Louis (1957): 787.

Women's All-Star Individual Match Game Championship (64 Games)

1949: Marion Ladewig, Grand Rapids.
1950: Marion Ladewig, Grand Rapids.
1951: Marion Ladewig, Grand Rapids.
1952: Marion Ladewig, Grand Rapids.
1953: Marion Ladewig, Grand Rapids.
1954: Sylvia Wene, Philadelphia.
1955: Anita Cantaline, Detroit.
1956-57: Marion Ladewig, Grand Rapids.

Miss Ladewig averaged an amazing 211 for the final 32 games in winning the 1951 championships.

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